

Kvalitetsvurderinger af studier udgivet i 2016

ID 29606598: Lerstrup, (2016)

Lerstrup I, and Refshauge A D. 2016. "Characteristics of Forest Sites used by a Danish Forest Preschool". *Urban Forestry & Urban Greening* 20:387-396.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
August 11, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The present article is part of Lerstrup's Ph.D. dissertation: Lerstrup (2016). Green Settings for Children in Preschools: Affordance-based Considerations for Design and Management.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The study aims to investigate the characteristics and use of forest sites in a Danish

forest preschool and the activities and features in use during time for child-initiated activities (see abstract at page 387). The specific research question is as follows: What are the characteristics of forest sites used and valued by children and staff in preschool, exemplified by the study of a specific Danish forest preschool? (p. 388)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

 - One-to-one interview

 - Focus group interview

 - Report of diary (field notes)

 - Video

 - Other (please specify)
The researcher also sketched and measured the sizes of the observed forest sites (see p. 388).

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 3 years

 - Children 4 years

- Children 5 years
- Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
 - Children 3 years
 - Children 5 years
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Other, please specify
The main topic of the study is the characteristics of forest sites used by a forest preschool.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Physical environment
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)

- Yes, please justify assessment
The study is briefly linked to previous research on children's outdoor behaviour (see p. 387).
- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The study aims to investigate the characteristics and use of forest sites in a Danish forest preschool and the activities and features in use during time for child-initiated activities (see abstract at page 387). The specific research question is as follows: What are the characteristics of forest sites used and valued by children and staff in preschool, exemplified by the study of a specific Danish forest preschool? (p. 388)
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. It is stated that "A field study was carried out with a group of 21 children aged approx. 3–6.5 and three staff members in a forest preschool. The preschool was chosen because it used many forest sites and was conveniently located. On average 4 out of 5 days a week in all seasons the 21 children walked to a forest site accompanied by 2–3 staff members for a stay of 2–5 h per stay. The forest sites were not designed with preschools in mind, but were chosen by the staff as suitable sites among a vast number of possible places in the forest as explained later. The forest preschool was located on the edge of Sorø, a small town 80 km west of Copenhagen, Denmark. The preschool premises were located close to the forest edge. The forest was open to the public, owned by a foundation and was primarily used for wood production." (p. 388) As such, the study lacks a thorough description of the participating children and staff members.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
It is stated that a group of 21 children aged 3-6.5 and three staff members in a Danish forest preschool were observed in 15 different forest sites at 24 stays during one year. The study consisted of the following steps: 1) The group of 21 children was observed for 1–2 h during times for free play in the forest. Throughout 2011, 24 stays with observations were conducted at 15 different forest sites; some sites were visited more than once. The activities and features in use were observed and registered in field notes and by video recordings by an ethnography-inspired method in which it is important to be present, preferably for long periods of time, to search for patterns. In order to disturb as little as possible when observing, the researcher participated as an 'atypical adult': the observer was accepted as part of the group, but neither as a child nor a staff member

(Gulløv and Højlund, 2003). 2) The observed forest sites were sketched using signatures such as districts, edges, special features, water and ground cover. The sizes of areas in use were measured by a mobile-phone app. 3) Short structured interviews were conducted with an enlarged group of children consisting of all children in the forest preschool, in total 41 children. The children were interviewed and videotaped in 18 groups of 2–4 by a staff member in the forest in early spring. The questions asked were: Which forest sites do you know? Which forest site do you like the best? Why? What do you do in the forest? It was assumed that children would mention sites, features and activities of value. Their answers identified meaningful activities and favoured features that the children could remember and were able to articulate at the moment. Semi-structured interviews were conducted with the preschool leader and the 3 staff members of the observed group in the forest in early spring. The themes were: good forest site, best forest sites and daily choice of forest site. 4) The choices of forest site, risk measures and places to be avoided were discussed informally with the staff on the observation days. 5) The staff kept a diary noting their place of stay in the forest for 152 days within the year of the study. Facts about the 28 forest sites were structured in a table. Information about the observed sites were structured and the maps studied in order to group and categorize site types. The staff statements about daily choices of sites were gathered from field notes and interviews. The interviews with children and staff members were transcribed and statements summarized in a table according to the ten classes of outdoor features, but also remarking statements that did not fit into the classes. The video recordings were viewed and re-viewed and the field notes read and reread in order to find patterns in activities and used features. Then observed activities were added to the table to represent children's nonverbal statements. At last video examples of activities and used features were edited for each class and added to the table. (p. 388)

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment

Yes and no. It is stated that the theoretical concept of affordances (developed by Gibson (1979)) framed the study. It is also stated that a classification of outdoor features for children in preschools was developed in an earlier study (Lerstrup and van den Bosch, 2016), and that this classification was used to structure the data in this present study. The classification included the following ten classes: Open Ground, Sloping Terrain, Shielded Places, Rigid Fixtures, Moving Fixtures, Loose Objects, Loose Material, Water, Creatures and Fire. Each class was specified by key activities based on analysis of observations. The key activities were the activities observed to be distinctive for the class and attractive for children in preschool. Within each class, the features that made the key activities possible were considered to be affording for children in preschool. The classes

were created to get an overview and not to suggest that features from the classes should be kept apart in different sub-settings. The definitions used in the present study are presented in Box 1 at page 388. The description of the data analysis process could have been better, however, and therefore it is not completely evident how the ten classes used to structure and analyse data from the present study were identified. Still, it is assessed that the transparency related to data analysis is sufficient, considering that this is a short journal article.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The description of the data analysis process could have been better, e.g. it is not completely evident how the ten classes used to structure and analyse data from the present study were identified. However, the authors give the reader some insight into the collected data by using figures and tables. Overall, it seems as if the whole breath of the data is presented.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical issues are not discussed by the authors, however it is stated that "Permission was obtained from parents to observe, record and use the video sequences for research and education. Permission from the children to make video recordings was obtained all along and the filming stopped when requested." (p. 389)
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Observations and interviews seem appropriate to examine the presented research question.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The methodological approach and data collection procedures are

described at page 388-389. However, more information on the participating children and staff members would have been desired.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Observation data and data from the interviews was organised and analysed against the concept of affordances (defined as the meaningful action possibilities of a setting) using ten previously identified classes of outdoor features resulting in facts about the locations chosen as forest sites, the daily choice of sites, features valued by staff and children respectively and considerations about risk. The description of the data analysis process could have been better, however, and therefore it is not completely evident how the ten classes were identified. Also, it is not stated how many researchers were involved in the coding and analysis of the collected data. Also, the authors do not mention interrater agreement of the final coding. However, in the discussion section previous research findings are used to reflect upon the results of the present study which is regarded a plus.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to other groups with the similar characteristics
At page 395 the authors state: "The fact that the results of the study are based on one specific forest preschool, where the forest was deliberately chosen as a frame for frequent stays, may lead one to question the extent to which it is reasonable to make generalisations based on the results. Still, the affording features of several forest sites observed through a year in this single forest preschool may also be affording features for children in other preschools. Therefore, the results may inspire the design and management of green settings for preschools until better data are available."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: This is a study done as a part of a bigger research work and related to its main theme. The design and Methods are proper to address the research question. The interviews are described in a transparent way and the theoretical

concepts are stated. The content of the study is presented and discussed in a coherent way. Reviewer 2: Based on the findings presented in the article the discussion is relevant and the conclusions seem sound. The authors also briefly mention methodological considerations and limitations of their study (see p. 396) and as such make their own reservations.

ID 27224187: ”De va svinhögt typ... (Albinsson)

Albinsson Anders. 2016. ””De va svinhögt typ 250 kilo” : Förskolebarns mätande av längd, volym och tid i legoleken”. , Institutionen för samhälls- och välfärdsstudier, Linköpings universitet PP Norrköping UL <http://urn.kb.se/resolve?urn=urn:nbn:se:liu:diva-124659>.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on March 15, 2017
 - A2: Type of publication (only one coding allowed)
 - Thesis/dissertation
Licentiatuppsats
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
Children's use of mathematical concepts during free play with LEGO bricks
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
Video recordings and participant observation
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

 - Report of diary (field notes)
Anteckningar
 - Video

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 2 years

 - Children 3 years

 - Children 4 years

 - Children 5 years

- A13: In studies with children, which age groups are covered?
 - Age 3-6
Children ages 2-5 years old
- A14: Who informs the study? (multiple coding allowed)
 - Children 2 years

 - Children 3 years

 - Children 4 years

 - Children 5 years

- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Children ages 2-5 years old
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Children's mathematical learning
 - Perspective of the child
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
Children's mathematical learning processes
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The researcher considers the contribution of the study to existing knowledge and relates the study topic, as well as the study findings, to relevant research-based literature. The researcher argues for the relevance of the study and the choices made during the research process as to the contexts and institutions selected. All relevant contextual information is fully disclosed, and the contexts in which the observations are carried out are described in richness and detail.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aims of the study, including the specific research questions, are described, and the author argues for the relevance of studying this particular matter. The purpose of the study is to explore children's use of mathematical concepts during free play with LEGO bricks.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The researcher provides all the necessary information concerning the sample used in the study, including its' selection and characteristics. The sample includes two preschool classes with children ages 2-5 years old.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Yes, the data collection methods are described in adequate detail, and the methodological choices made are argued for and justified.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There is a clear description of the analytical process, provided in step-by-step explanations of the process, from start to finish. The author does not provide examples of coding procedures which would have further increased the analytical transparency. The researcher examines his own potential biases and prejudices, related to the fact that he has worked as a preschool teacher for many years. He describes how he tries to critically challenge his own assessments and seeks help to do this within the research literature and in his interaction with other researchers and counselors.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is reported with more than adequate transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - Yes, please justify assessment
The data are kept in a closed space at university only accessible to the researcher and his counselors. See page 59.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports on the research questions stated. One could argue that his analysis is not very critically minded, in that he sees mathematical learning in all the situations described, and thus in some ways constantly finds what he was looking for. This however does not seem unrealistic, since the mathematical concepts he describes are basic and seem well aligned with what happens in LEGO play.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author follows the necessary ethical guidelines and takes basic ethical principles into consideration (confidentiality, consent, information etc.).
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, the choice of an ethnographic approach, including participant observation

and video recordings, is well suited for examining children's use of mathematical concepts during free play with LEGO bricks. The author argues for the appropriateness of the design chosen and links it with his wish to include children's own perspectives.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The author does not mention the subjects of reliability, repeatability, validity and trustworthiness per se. However, the rich descriptions and the amount of contextual data provided allow for replication of the study, in the sense that other researchers would be able to carry out similar investigations in other settings. The author gives transparent descriptions of the methods used and argues for his choice of methodology. The author also addresses the subject of reflexivity, here meaning the critical examination of his own potential biases and pre-determined conceptions. He makes critical assessments of his own choices and interpretations and also reflects on the internal validity of the study (he uses the term "logic", meaning the harmony between single parts and the unity of the study). He argues for the consistency between the aims, research questions, data collection methods and subsequent analyses. The subjects of reliability and validity could have been explored in some more depth, providing further strength and quality to the study.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There is a clear and adequate description of the analytical process, divided into analytical steps. Empirical examples are used as analytical starting points, providing illustrations of the mathematical concepts covered during children's play with LEGO bricks. Sufficient data are presented to support the findings, and the researcher openly discloses his own potential biases. Contradictory data are not taken into account, which however does not seem problematic, since the point of the study is to explore different forms of mathematical learning, and since the mathematical concepts described are basic to child play in general. It would increase the quality and trustworthiness of the study if the author had considered the subjects of validity, reliability and trustworthiness in more depth and had included some final comments on the study's credibility and the range of the conclusions made (generalizability).
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)

- A little, please justify assessment
It is not the aim of a qualitative, small scale ethnographic study such as this to rule out sources of bias or alternative explanations. The purpose of the study is to explore mathematical learning concepts, and this is done in a plausible and transparent manner. The author makes some considerations on his own potential biases and previous experience within the field.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
In page 48, the author mentions that the results presented do not represent "the truth" or how something is, but rather how something seems to be. The author states that it is necessary to be cautious about generalizing the findings.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No, the conclusions/results are described in-depth, exemplified and made plausible. Reviewer 2: This is a very well described study, and the author reports in depth on all the most important scientific requirements needed to be of high quality. As already mentioned, the author could have elaborated in more detail on subjects such as validity, reliability and trustworthiness, but overall the reporting of the study has a high trustworthiness in terms of having a very high transparency.

ID 27392389: Ackesjö (2016)

Ackesjö Helena, and Persson Sven. 2016. "The Educational Positioning of the Preschool-Class at the Border between Social Education and Academic Demands : An Issue of Continuity in Swedish Early Education?". *Journal of Education and Human Development* 5(1):182-196.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
March 14, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
This study's overarching aim is to produce knowledge about the educational position of the preschool-class. In order to analyse the educational position of the preschool-class, this study examines how teachers describe and present their teaching and activities in their weekly reports to parents. (See p. 183-184)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Document study

The empirical material that has been analysed in the study comprises 249 weekly letters from eight geographically spread preschool-classes and was collected during the school year of 2013-2014. The study thus takes the form of a kind of document analysis, in which the weekly reports are viewed as examples of cultural practice (Popkewitz, 2004) which reflect what the teachers do, how the teachers understand their work and what they want to convey to the parents. According to the authors the reports usually comprise a text of between a half and a full page of A4. Some of the teachers wrote very detailed and informative accounts of the preschool-class's activities. Others wrote brief schedule-like reports which contained only cursory information about the class's activities. The majority of the teachers described the contents of the coming week's activities in their weekly reports, while some chose to present a relatively detailed description of the past week. Some teachers attached one or more photos to the reports in order to illustrate what the children had been engaged with during the week. In some cases, information on the after-school childcare centre activities that the six year-olds had participated in was also included with the reports. (See p. 186)

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Collection of data from day-care (minutes of meeting, calendar etc.)

Teachers in eight studied preschool-classes sent between 22 and 38 weekly reports each over the course of one school year. The data material comprises a total of 249 weekly letters/reports.

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

- A13: In studies with children, which age groups are covered?
 - Not applicable

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
Teachers from eight preschool-classes.
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Transition from day-care to school
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
This study's overarching aim is to produce knowledge about the educational position of the preschool-class, that is the form and content of the preschool-class teaching and activities (e.g. what happens in the context of the preschool-class's preparatory and qualification activities, what the teaching looks like and what forms of content the focus is directed at).
 - Basic values and/or ethics
The study focusses on which values the activities of the preschool-class are based on.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in a historical and cultural perspective
The authors view the analysed reports as examples of cultural practice (Popkewitz, 2004) which reflect what the teachers do, how the teachers understand their work and what they want to convey to the parents. Teachers writing and parents reading of the weekly reports constitute part of a social and cultural practice that constructs the educational position of the preschool-class.
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The study is linked to previous research and evaluations on the educational positioning of the preschool-class. (See p. 183-184). Also, the Swedish preschool context is presented in a sufficient way to frame the study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
This study's overarching aim is to produce knowledge about the educational position of the preschool-class. In order to analyse the educational position of the preschool-class, this study examines how teachers describe and present their teaching and activities in their weekly reports to parents. (See p. 183-184)
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Yes and no. The sample of the study is not described in detail. It is merely stated that teachers from eight geographically spread preschool-classes agreed to send all weekly reports and other information (letters from the school head and information from the library and after-school childcare centres etc.) to the researchers over the course of one school year. (See p. 185)
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
It is stated that an invitation to participate in the study was sent by e-mail to a network of preschool-class teachers with which contact had already been established. The teachers were asked whether it would be possible to include the researchers in the e-mailing lists that they used to mail their weekly reports to parents. The teachers from eight preschool-classes agreed to send all weekly reports and other information (letters from the school head and information from the library and after-school childcare centres etc.) to the researchers over the course of one school year. (See p. 185)
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
On the basis of a curriculum theoretical perspective – which views teachers as being active in the construction of the preschool-class “curriculum” – the position of the preschool-class is analysed through an examination of the teachers own descriptions. In order to analyse the educational position of the preschool-class, the study examines the weekly reports that the teachers send home to the parents each week. It contains descriptions of how their teaching is organized and the activities in the classroom. It includes the goals of their activities and which values the activities of the preschool-class are based on. The authors state that the analysis was conducted in what Säfström (1999) has labelled an interpretive reading, which has involved interpreting the weekly reports in two different ways, in two phases. Firstly, the meaning content of the weekly reports was categorised on the basis of a meaning-interpretive approach, i.e. the contents of the weekly reports have been categorised on the basis of which goals were emphasised in the preschool-class, how the teaching was organised and which values the class's

activities were based on. Secondly, the presentations have been related to two educational traditions: the social pedagogy and the academic school readiness. In the context of the analysis process the authors have focused particular attention on how the teachers present goals, organisation, motivations for the activities and teaching and the values that are embedded in the teaching. According to the authors, this is what constructs the preschool-class's educational position. (See p. 184-186)

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. However, the study lacks detailed information on sample and sampling strategy.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors have discussed the key focuses of the research question (goals, organization, motivation and values for teaching preschool-class). The process of analysis is described in detail, and the quotes from the week plans are coded to show how the data material is used in its breadth.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that the study has proceeded on the basis of the ethical guidelines published by the Swedish Research Council (Vetenskapsrådet, 2008). When the invitation to participate in the study was sent, it was made clear that the weekly reports would be used for research purposes, that they would be analysed and that the results would be published. The teachers were informed that they could withdraw from the study during the course of the project. A number of the teachers informed their pupils' parents that the weekly reports were to be used for research. The article does not include the names of any schools, preschool-classes, children or teachers. (See p. 186)
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It seems that a document analysis is sufficient enough. However, seeing that a more extensive data material would have given a more solid base for conclusions, data triangulation would have been desired. The authors briefly reflect upon the methodological reservations of the study on page 194: "(...)we see strong links to

an academic tradition and positioning in the activities described by the teachers in the weekly reports, together with learning focused on future-requirements and links to current policy documents. This may of course be due to the method we have chosen to use. It is possible that there are differences in how the teachers describe their activities, between what they choose to describe (e.g. learning and teaching) and what they choose not to write about (e.g. play and care provision). The weekly reports are performative and constitute examples of what the teachers want to present to the parents. It may be assumed that there is some level of adaptation to what teachers believe the expectations of the parents to be in relation to the teaching in the preschool-class."

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors briefly reflect upon the methodological limitations of the data collection (see p. 194). However, more information on the participating teachers and the sampling strategy would have been desired.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors describe the strategy and process of their document analysis (see p. 185-186).
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The data material in this study consists of text written by the preschool teachers themselves, and this would remove some possible sources of bias as it is not a text colored by the researchers interpretation. Still, in a qualitative study it is hard to rule out any possible bias in the interpretation of the data material.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The study is thorough, and even though the reviewers would have wished that the sample and the sampling strategy had been described in more detail, the conclusions seems sound and relevant in light of the results presented.

The analysis and results are also described in a transparent way. Reviewer 2: Though the authors preferably should have provided more details about the sample and the recruitment of the sample, the data collection method and analysis process is described in sufficient detail. Therefore the findings and conclusions seem reasonable.

ID 27392397: Alatalo (2016)

Alatalo Tarja, Meier Joanna, and Frank Elisabeth. 2016. "Transition between Swedish preschool and preschool class : a question about interweaving care and knowledge". *Early Childhood Education Journal* 44(2):155-167.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
March 16, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
On page 165 it is stated that the present study was completed as a platform for further research on transitions with focus on transferring information about children's written language learning.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The present study aims to examine teachers' experiences with the transition

process between preschool and preschool class, with a focus on factors that benefit continuity and children's long-term learning in the target areas of the curriculum. The primary research questions underlying the study are as follows: are transition activities implemented between preschool and preschool class, and if they are, how? And what experiences do teachers have with the transition process? (see p. 156)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is a mixed methods research

- A10: What is the design of the study? (multiple coding allowed)
 - View study
The present study focuses on preschool teachers' and preschool class teachers' experiences with the transition process between preschool to preschool class.

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
Semi-structured interviews were conducted with four teachers from preschool and four teachers from preschool class.
 - Questionnaire
The questionnaire was answered by 36 preschool teachers and 38 preschool class teachers.

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

- A13: In studies with children, which age groups are covered?
 - Not applicable

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
Preschool teachers and preschool class teachers.

- A15: In cases where children inform the study, which age groups are included?
 - Not applicable

- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Transition from day-care to school
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The study is linked to previous research on the transition between preschool and preschool class. (See p. 156-158)
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The present study aims to examine teachers' experiences with the transition process between preschool and preschool class, with a focus on factors that benefit continuity and children's long-term learning in the target areas of the curriculum. The primary research questions underlying the study are as follows: are transition activities implemented between preschool and preschool class, and if they are, how? And what experiences do teachers have with the transition process? (see p. 156)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
It is stated that a convenience sample was used, and that about 200 questionnaires were distributed to preschool and preschool class teachers. In this case, the questionnaire was answered primarily by teachers who were tutoring student teachers in the practicum component of their teacher training in different parts of Sweden. The student teachers were asked to bring the questionnaire to the teachers of the 5-year-olds and the preschool class in their practical training school. Further it is stated that 74 teachers in the schools where the students were doing their placements chose to participate, but there is no knowledge of how many of the surveys actually reached the requested teachers. Therefore, the authors cannot comment on the response rate. It is possible that some

questionnaires did not arrive, but it is also likely that many teachers chose not to participate. For more information on the sample see p. 158.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The questionnaire and interviews are described at p. 159, and the overall interview guide is provided in an appendix at p. 165. It is assessed that the methods of data collection is adequately described, considering that this is a short journal article.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
It is stated that the theory of the proximal zone of development (Chaiklin 2003; Vygotsky 1986) framed the analyses. The survey data were analyzed with descriptive tools such as frequency analysis and cross tabulations using the software SPSS whereas the recorded interviews were transcribed in their entirety immediately after the interviews. Further it is stated that the data analysis was conducted abductively in the sense that the themes identified in the survey and interview data were based on the theoretical points and questions of the study. Thus, the themes were formed by both the data as well as the researcher's theoretical understanding. (...) Recurring statements and assertions in the material became important themes. Further, similarities and differences were searched for in the material. Statements were compared and paired to investigate how the opinions were similar to or different from the others. The material was sorted using the "cutting-and-sorting method" (Bernard and Ryan 2010, p. 71), which means that statements, repeated words or sentences and significant connections, patterns and keywords found in the printed material were sorted into the different themes. (p. 159). It is assessed that the methods of data analysis is adequately described. For further information on the analysis process see page 159.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The method and analysis process are described in a rather detailed way in light of this being a short research article.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on all variables aimed to study. In addition, the authors give

the reader some insight into the interview data by using central quotes to exemplify the main findings.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 158 it is stated that the teachers who were invited to participate in the survey study were informed about the aim of the study and the fact that participation was voluntary. They were also promised anonymity. Further it is stated that ahead of the interviews, informants were given a brief description of the principles of research ethics (The Swedish Research Council 2002) that frame the study (see p. 159). The anonymity of the informants was also secured.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that a questionnaire survey and an interview study is sufficient enough for addressing the research questions posed. However, the sample size is relatively small.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Yes and no. Triangulation across data sources (interviews and questionnaires). Furthermore, it is stated that one person conducted all interviews, and the overall interview guide is provided in an appendix. However, the sampling strategy and administration of the survey study seems to be problematic and a little failed. It is stated that "the questionnaire was answered primarily by teachers who were tutoring student teachers in the practicum component of their teacher training in different parts of Sweden. The student teachers were asked to bring the questionnaire to the teachers of the 5-year-olds and the preschool class in their practical training school. (...) About 200 questionnaires were given to the student teachers to deliver, and 74 teachers in the schools where the students were doing their placements chose to participate. There is no knowledge of how many of the surveys actually reached the requested teachers, which makes it difficult to comment on the response rate. It is possible that some questionnaires did not arrive, but it is also likely that many teachers chose not to participate." (p. 158) Therefore, one could suspect a large number of non-respondents (who almost invariably differ from respondents), and that this affects the validity and reliability of the responses obtained.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)

- Yes, please justify assessment
A few excerpts of the interview transcriptions are used to illustrate the authors' interpretations which is regarded as a plus, as is the fact that data triangulation (interviews and questionnaires) is used. Also, the study's theoretical approach (the theory of the zone of proximal development) and previous research findings are used in the discussion of the findings. It is assessed that the transparency related to data analysis procedures is sufficient, considering that this is a short journal article. Therefore, it is transparent how the authors have categorized the collected data, and how they arrived at the results, and therefore the results seem valid. Also, the authors briefly reflect upon challenges of the analytical strategy: "A weakness that needs to be considered in an abductive method is that it may restrain the identification of new themes and prevent surprising results from being found. On the other hand, it can be a strength to start from a described structure since it can be of help in the search for connections between data sets and research questions (Bernard and Ryan 2010). (...) To ensure that the entire material was analyzed accurately and reliably, a matrix was constructed to organize the themes and data that fitted into the themes. Initially, the material was divided into a number of different themes. These themes were further carefully investigated (...)" (see p. 159).
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The design and methods used seem to rule out some potential bias. The questionnaire consisted of both fixed questions and an open question where respondents were given the opportunity to develop their ideas about what had been covered in the questionnaire. This strengthens the trustworthiness and rules out some of the potential bias when using questionnaires. Still, the uncertainty about the response rate and who actually received the questionnaires, and how this might have influenced the results of the study is somewhat problematic.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
On page 165 the authors state: "The study was conducted on a relatively small scale, which means that generalization claims are limited." I read this as a statement of the study not seeking to generalize its' findings.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The authors describe most of the procedures of method, data collection and

analysis in an adequate way, and the conclusions seem sound in light of the results presented.

ID 27392404: Areljung (2016)

Areljung Sofie, Ottander Christina, and Due Karin. 2016. ""Drawing the leaves anyway" : Teachers embracing children's different ways of knowing in preschool science practice". *Research in science education*:

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
May 15, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
It is stated that "The study is part of a larger project where material has been produced in collaboration between six researchers and 11 Swedish preschools (children aged 1–5 years), between October 2011 and February 2014 (Sundberg et al. 2015)."
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The overall purpose of this study is to examine if and how Swedish teachers

combine science and preschool practices into preschool science practice. Thus, the study explores (1) how teachers' talk about science in preschool relates to possible ways of knowing, and (2) how teachers handle the possible tensions between preschool practice and science practice.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
It is stated that "The research presented here is part of a larger project funded by the Swedish National Research Council (VR-UVK)".
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Focus group interview
The data material consists of video-stimulated focus group discussions.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 1 year

 - Children 2 years

 - Children 3 years

 - Children 4 years

 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Age 1-5.

- Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The theoretical frame of the study is described, as is the Swedish context in which the study is conducted. The study is also linked to previous research on early childhood science.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall purpose of this study is to examine if and how Swedish teachers combine science and preschool practices into preschool science practice. Thus, the study explores (RQ1) how teachers' talk about science in preschool relates to possible ways of knowing, and (RQ2) how teachers handle the possible tensions between preschool practice and science practice.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
The sample of the study is not described in sufficient detail. It is merely stated that teachers from 11 preschools participated. Further it is stated that the present

study is part of a larger project where material has been produced in collaboration between six researchers and 11 Swedish preschools, and that the main selection criterion of preschools was that the preschool staff had science as an articulated part of their practice.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment

It is stated that the data material consists of video-stimulated focus group discussions (or group interviews) from 11 preschools, and that teams of three to five teachers (from each preschool) participated in the discussions, as well as one or two researchers. Further, it is stated that the researchers visited the preschools on 5–12 occasions per preschool and made observations and video recordings of practice. About the focus group discussions, the authors state: "For the focus group discussions, we chose approximately half of the video material from each preschool, seeking episodes that we wanted the teachers to discuss. Such episodes included, based on our overall impression from our observations in that preschool, recurring strategies or surprising actions. For example, one of the chosen sequences shows children and teachers stopping by a drain to listen to the sound of small stones hitting the water surface. We chose this sequence since we had found that their lingering over children's discoveries was a recurring strategy for drawing attention to scientific phenomena." (...) "The discussions lasted for between 40 min and 2 hours, and during 10 to 30 min of this time, video sequences from that particular preschool were shown. The goal was that the teachers should discuss science in preschool, while researchers had a more peripheral role, mainly asking clarifying questions referring to what the video episode had shown, such as 'What happened before, or afterwards?'. The researchers also asked for general descriptions relating to the video episodes, such as 'Is this how you usually work?'. The discussions were video- or audio recorded and transcribed and the transcripts make up the material we have analysed."

- C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment

In this study the authors build their analysis on the concepts pairs objective-subjective and logical-intuitive to operationalise 'possible ways of knowing in science in preschool', generating analytical questions as well as categories from dictionary descriptions together with the empirical material. It is stated that "The reason for choosing the two concept pairs objective-subjective and logical-intuitive in particular is that they concern views on knowing. Such views become increasingly crucial as the preschool responsibilities transits from mainly care to also include teaching science. What counts as valid ways of knowing is something

that likely differs between preschool practice and science practice, since preschool practices are associated with femininity at a symbolic level, that is with caring and the subjective sides of knowing, and science practices are associated with masculinity at a symbolic level, with objective sides of knowing." Further, it is stated: "For an initial sorting of the transcripts, we needed analytical questions that grasped the meaning of the concept pairs objective-subjective and logical-intuitive. The dictionary speaks of objective as being independent of the individual while subjective is described as 'modified or affected by personal views, experience, or background', as well as 'lacking in reality or substance: illusory'. Bearing this in mind while reading and re-reading the transcripts, we established that the analytical question connected to the objective-subjective pair concerns how to gain knowledge about the material world. In a similar way, we established that the question connected to the logical-intuitive pair concerns how to reach explanations of scientific phenomena given that, 'logical' can refer to formal reasoning based on 'logic', i.e. on an inevitable series of facts, and 'intuitive' refers to instinctive explanations without evident rational inference. Accordingly, the questions that guided our selection of transcript quotes were as follows: does the sequence concern how to gain knowledge about the material world or how to reach explanations of scientific phenomena? The analytical questions are as follows: what appear as possible ways of gaining knowledge about the material world or of reaching explanations of scientific phenomena? (see Table 1). Formulating and recognising categories, the analysis of the transcripts resulted in ten categories related to the concepts objective-subjective (see Fig. 1) and five categories related to logical-intuitive (see Fig. 2). The procedure of finding the categories was as follows: First, we distinguished categories that were adjacent to the descriptions of the words objective, subjective, logical and intuitive (Merriam Webster online n.d.). (...) In some cases, we have found it necessary for a category to divide in two, or for new categories to break out from them."

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes - considering that this is a short journal article. However, the study lacks detailed information on sample and sampling strategy.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
There is a detailed description of the data analysis process, and how the emerging

categories of results were identified and interpreted. The choice of examples from the data material is justified and both research questions are sufficiently covered.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that "The study has followed the ethical principles relating to basic individual protection requirements outlined by the Swedish Research Council (2011), regarding information, informed consent, right to withdraw from participation, confidentiality and use of data." The authors do not further discuss ethical aspects of their study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. The study is a qualitative study exploring how teachers' talk constructs and relates to possible ways of gaining knowledge and reaching explanations of phenomena in preschool science. Thus, the aim of the study was explorative and the research methods were explorative. Therefore, video-stimulated focus group discussions seem appropriate.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. More information on the participating teachers and the sampling strategy would have been desired. Also, the authors could have reflected more upon the methodological limitations of the data collection. This is only briefly touched upon as the authors state: "It is important to note that our sample of preschools is based on science being an articulated part of their practice. This condition might be an indicator of these teachers having relatively more content knowledge and confidence regarding science than say, other preschool teachers, which in turn could be crucial to daring, and knowing how to work with science in a way that is not constrained by dichotomous conceptions." This study being part of a larger study with several (six) researchers, some of who were not part of this particular part of the study, is not elaborated upon. This should have been done, and more details about the data collection process and if all the six researchers were part of this should have been provided to heighten the transparency of the study.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The use of theories concerning symbolic gender and power relations, together

with the two concept pairs objective-subjective and logical-intuitive, is well described and accounted for. The authors also describe the strategy and process of their analysis, and excerpts from the interview transcriptions are used to illustrate the authors' interpretations.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is difficult to rule out bias in studies of this character. The authors could with advantage have elaborated on the limitations of the data source or presented alternative explanations for their findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The methods seem appropriate to explore the research questions, and the analysis process is described in detail. The results presented are interpreted in-depth and the conclusions made seem sound and relevant. Reviewer 2: Even though the authors could have provided more details about the sample and the recruitment of the sample, the data collection method and analysis process is described insufficient detail, and therefore the findings and conclusions seem reasonable.

ID 27392388: Ärlemalm-Hagsér (2016)

Ärlemalm-Hagsér Eva, and Sundberg Bodil. 2016. "Naturmöten och källsortering - En kvantitativstudie om lärande för hållbar utveckling i förskolan". *Nordina* 12(2):140-156.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on March 17, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
This study is part of an international comparative study with participation from Australia, Japan, Korea, Singapore, Norway and Sweden.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
How do preschool teachers understand and work with education for sustainable development?
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - University/research institutions, please state the name of the funder
Adlerbertska Stipendiestiftelsen, Örebro Universitet and Mälardalens Högskola.

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content

- Basic values and/or ethics
- Intention and purpose
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Physical environment
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The relevance and context of the study is described in necessary length and transparency
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aims are clearly stated, with the purpose of the study being to explore how preschool teachers understand and work with education for sustainable development.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sampling strategy is adequately described, and the drop-out rate for the questionnaire is clearly stated. There are no considerations on drop-out size or distribution. The questionnaire was distributed to 187 Swedish preschools, with a response rate of 51 %.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There is an adequate description of the method used, with details on the construction of the questionnaire provided.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The description of analytical procedures is adequate and carried out with good transparency. It is possible for the reader to understand and follow the analytical process, and examples are provided. The statistical analysis could have been described in some more length, but apart from that, there are no remarks to be made.
 - C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment
Overall, a study with good transparency and coherence.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement is made.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors carry out their aims as stated
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
There is a short statement made regarding research ethics.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, the research design seems appropriate for answering the research questions posed in the study.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors are aware of the study's limitations and present these with good transparency. The authors take the subject of reliability into consideration when reflecting on the relatively small sample size and the impact of this upon the statistical possibilities for determining significance (page 152). They also reflect upon the weakness of the study in determining the actual possibilities for children's active participation (due to the written questionnaire form. Page 152).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors take the subject of reliability into consideration when describing how the analytical process has been carried out individually by two researchers and then in unison, with the purpose of strengthening the reliability of the analysis (page 146). The authors do not explicitly mention the subject of validity, but overall, the study has good internal coherence – the aims, methods, analyses and conclusions are well aligned, and the authors carry out their aims as stated. The authors are open as to the weaknesses of the study and put forth these in a transparent manner.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The statistical analysis made in this study seems somewhat basic and is merely descriptive, this however is not a problem, since the authors do not claim anything else. Their aim is to make a descriptive analysis, and they do exactly this, with the addition of some considerations on differences between two groups. They are transparent as to when it is possible to claim statistical significance. There are no considerations on drop-out size or distribution.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The conclusions made seem reasonable and do not state more than what is plausible based on the empirical data. The aim of the authors is to make a descriptive analysis, and they do exactly this, with the addition of some considerations on differences between groups. They make suggestions, pose ideas and interpretations and ask for more research within the field, while staying aware of the study's limitations. Reviewer 2: No. The findings are explicitly described and the discussion is in line with the questions posed at the outset of the article. It is of great value to do a quantitative study on a topic so far characterized by qualitative studies alone. However, the study has some weaknesses as a quantitative study. The sample size is apparently too small to represent the many geographical typologies mentioned at the end of page 144. The problem caused by a small sample is further strengthened by a low response rate (51 %). A consequence is that the analysis becomes descriptive and rather cursory. I also miss information about how the questions in the questionnaire are exactly formulated.

ID 27392411: Bevemyr (2016)

Bevemyr Mats, and Björk-Willén Polly. 2016. "Events of potential learning : how preschoolers produce curriculum at the computer during free play periods". *Nordisk Barnehageforskning* 12(8):1-16.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on March 17, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
"This paper draws on data from two studies on children's interactional practices at the computer. The first study is part of a larger project funded by the Swedish Research Council and led by Professor Karin Aronsson (VR no. 2007-3208). The second study is part of a PhD project." This study must be linked to a study previously described in the NB-ECEC database, namely that of Bevemyr (2014): Children's use of everyday mathematical concepts to describe, argue and negotiate order of turns.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description
 - The focus of the paper is on children's (aged 3-5 years) "communities of practice" at the computer during "free play" periods in Swedish preschool settings.*
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
Data is drawn from two studies, one of which is funded by the Swedish Research Council.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
3-5 years old
- A14: Who informs the study? (multiple coding allowed)
 - Children 3 years
 - Children 4 years
 - Children 5 years

- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Ages 3-5 years old
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Curriculum
 - Perspective of the child
 - Technology and ICT
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Social system
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Yes, contextual information is provided, describing: why is this important, what is the theoretical context, what is the Swedish context (curriculum etc.)?
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
Yes, the aims of the study are provided, with the purpose being to explore children's "communities of practice" at the computer during "free play" periods in Swedish preschool settings.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Yes and no. There is a short description of sampling. However, the sampling criteria of the two studies from which the preschools were chosen should have

been described in more detail, even though this is a short research article. The scarce information leaves uncertainty about the characteristics of the chosen preschools and if they were special in any way. This is especially important since the preschools are recruited from two different research studies where different sampling procedures /criteria might have been used. The focus of the paper is on children's (aged 3-5 years) "communities of practice" at the computer during "free play" period in two various Swedish preschool settings.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Short, but adequate descriptions of methodology. Adequate when considering the format of a short journal article.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes, there is an adequate description of the analytical strategy used in the study, especially when considering the format of a short journal article.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The overall transparency of the study is acceptable, however inadequate information is provided on the two studies, from which the data are drawn (no clear definition of references). This leads to some difficulty for the reviewer in assessing whether or not the present article contains a new/original data analysis, as opposed to "just" presenting earlier findings.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such information is provided.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on the aims stated, and the choice of excerpts from the data material is described and justified.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
Reviewer 1: This reviewer has no concerns as such, but the subject of ethics is hardly considered, apart from a short statement about anonymity. Reviewer 2: The nature of the study, including video recording of children, would call for a particular consideration of research ethics. The authors do not touch upon this issue or describe how e.g. informed consent (from parents and children), the option to withdraw from the project at any time, or how intrusion into the

children's private sphere were handled. A statement that anonymity of the children is secured by using fictitious names is the only place where some ethical consideration is mentioned.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design and methodology seems well-suited for answering the research aims/questions.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Reviewer 1: There are no obvious concerns as to the study procedures; the weaknesses regarding validity and reliability in this study stem merely from the fact that these concepts are not directly addressed or considered. Reviewer 2: The method of data collection is described as well as the analytical process. This makes it possible for other researchers to conduct a similar study. Nevertheless, the limited description of the sampling process(es) and criteria makes the study less transparent.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analytical process is sufficiently described, the aims of the study are convincingly met in the analyses and conclusions, and the authors' statements seem plausible and are easy to follow (no over-statements). The results presented are sufficiently backed by empirical examples.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is not the purpose of a small scale, ethnographic study such as this to rule out sources of bias or alternative explanations. The authors make no considerations in this regard.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)

- No, please justify assessment

Reviewer 1: The aims of the study are convincingly met in the analysis and conclusions, and the authors' statements seem plausible and are easy to follow (no over-statements). The results and conclusions are supported by empirical examples. Reviewer 2: The study has a clear aim and research questions and the methods seem appropriate to explore these questions. The method and analytical process are sufficiently described. The results presented are convincing and the conclusions made seem sound and relevant.

ID 29324065: Bjørgen (2016)

Bjørgen Kathrine. 2016. "Physical activity in light of affordances in outdoor environments: qualitative observation studies of 3–5 years olds in kindergarten". *SpringerPlus* 5:950:.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 20th of September, 2017.
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Bjørgen, K. & Svendsen, B. (2015). Kindergarten practitioners' experience of promoting children's involvement in and enjoyment of physically active play: Does the contagion of physical energy affect physically active play? Contemporary Issues in Early Childhood 16(3), 257-271.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
 - Observation study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 3 years
Children in kindergarten
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
Age 3-5
- A14: Who informs the study? (multiple coding allowed)
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Age 3-5
- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Health
 - Children's physical action and development in day care
- B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Physical environment
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The author relates the study to other studies within the field and she draws on different theoretical perspectives. Furthermore she relates the study within a political context. It is clear why this study is important. There is no information given on research funding.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study as well as the relevance of it is presented. The aim is to examine how the affordances in two different outdoors environments explain children's level of physical activity.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The author presents the criteria for the selection of a kindergarten, though it is not accounted for how exactly this kindergarten was identified. The recruitment of the kindergarten is clarified. The kindergarten as sample is described adequately.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
This study is based on observations and video-recordings and the author has justified the methods explicitly. It is stated when the video camera was not used, field notes were used and a description of how they were carried out. The setting of the data collection is described and argued.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment
Yes and no. The choice of a thematic analysis is clarified and the strategy for the analysis as well. There are reflections about the researcher's influence during data collection and analysis. Apart from this, it seems strange that the researcher choose to observe the children for 20 days but only selecting 6 days for further examination. It is stated that those 6 days are randomly selected to reduce the amount of data (see page 4). Why do observations for 20 days to only examine 6 of them? And how was the random selection carried out?
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The context and theoretical foundations are clarified and the aim is clear. The information given on sampling, research methods and analytical procedures is transparently reported.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - Yes, please justify assessment
It is stated that all data material will be deleted when the project is concluded.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author answer the research question presented. The process to answering the research question is clarified and justified. Furthermore, the author reflects on own role during the data collection and the analysis. Two assistants were used to help coding the data collection.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Etchical concerns are discussed. The project is approved by Norway Social Science Data Services. Informed consent was obtained. Full anonymity was guaranteed. See page 4 for details.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - No, please justify assessment
The research design is meaningful in relation to the aim of this study.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall the methodological procedures are described adequately. Information is given on how the sample was identified and recruited. The author has reflected about own role during data collection.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Strategy of the analysis is provided. Two assistants were used to help coding the children's levels of physical activity. Afterwards coding of the children's levels were compared and regulated according to a common understanding. However, the validity can be questioned when the chosen 6 days of data are randomly selected to reduce the data - are those 6 days representative for the rest of the days observed?
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The research design and the chosen methods are meaningful compared to the aim of this study. The context in this study is sufficiently described why the descriptions for the findings are reasonable. As stated previously, it is problematic that it is not discussed why a random selection of data was the right choice. However, the author does reflect about circumstances that could potentially have led to other findings (see page 10).
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The author states that generalizing is challenging since observations were only made in one kindergarten.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. Sufficient data are presented to support the findings in the analysis. The focus and the aim are clear, and selected data for presentation have been discussed with assistants to strengthen the interpretations of the data. However, and as stated previously, the validity of the conclusions is questionable due to lack of information about the random selection of the data. Reviewer 2: No.

ID 29456118: Björklund (2016)

Björklund Camilla, and Barendregt Wolmet. 2016. "Teachers' pedagogical mathematical awareness in diverse child-age-groups". *NOMAD - Nordic Studies in Mathematics Education* 21(4):115-134.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on September 4th, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Björklund, C. & Barendregt, W. (2016). Teachers' Pedagogical Mathematical Awareness in Swedish Early Childhood Education. Scandinavian Journal of Educational Research 60(3), 359-377.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Exploration of relationships
Differences in teachers' attention to mathematical content areas depending on the age group they are teaching.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative

- A10: What is the design of the study? (multiple coding allowed)
 - View study
Preschool teacher self-report.
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 1 year

 - Children 2 years

 - Children 3 years

 - Children 4 years

 - Children 5 years

- A13: In studies with children, which age groups are covered?
 - Age 0-2
The following age divisions are used: 1-3 and 4-5 years old
 - Age 3-6

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

- A15: In cases where children inform the study, which age groups are included?

- Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Mathematical content
 - Pedagogical practices
 - Other, please specify
Mathematics
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
Mathematical learning
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study is well described, both in terms of the theoretical foundations for the research and the national context from which the data stem (with descriptions provided of the Swedish daycare system and the national curriculum). The concept of "pedagogical content knowledge" is clarified on page 119, and other relevant research contributions and theoretical concepts are presented and discussed.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aims and specific research questions guiding the study are clearly presented, both in the abstract which begins the article, and in pages 119-120. The research questions are as follows: - Are there differences in teachers' attention to the different mathematical content areas depending on the age group they are teaching? - If mathematical content areas show differences between age groups, what pedagogical awareness levels constitute these differences?
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample used in the study is shortly presented on page 120. It is stated that

questionnaires were distributed to 147 preschool teachers from three municipalities in southern and middle parts of Sweden. The response rate is provided (79%, equaling 116 complete answers). The teachers are divided into groups depending on which age groups they mainly work with. The sample sizes for these groups are given, and the authors clarify why there is a difference in the number of respondents between the two groups (group sizes mirroring the overall number of age specific groups in Sweden). The authors do not clarify the selection criteria applied when recruiting respondents.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The questionnaire instrument is adequately described in pages 120-121. In this description, the authors clarify the theoretical concepts upon which the questionnaire was developed (PCK and developmental pedagogy). The questionnaire is not attached in full length, however the overall response categories and mathematical knowledge areas are described, as well as the six pedagogical awareness levels. These descriptions provide the reader with an adequate sense of the nature of the instrument used. The overall number of items for analysis (24) is also presented. More information on e.g. the choice of this particular method is not provided, which however should not be seen as a major flaw considering the article format (which only allows for relatively short methodological descriptions). In this sense, the information provided by the authors is adequate and to the point.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The analysis as such is transparently presented, in that tables and levels of significance are shown. The analysis follows a clear and logical structure in which results are presented for each content area and awareness level. Theoretical concepts are discussed during the analysis, providing a clear theoretical foundation. However, an analytical strategy is not presented as such. Of course, the description of the instrument and its' awareness levels and items gives some idea as to the analytical strategy, however the statistical procedures should also have been presented. It may be obvious to the statistically minded researcher how and why specific models/correlations/tests are applied, in this case a Mann-Whitney U test, however these choices should be further clarified (it can be done in a very short format fitting a research article).
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is reported with sufficient transparency, however with some weaknesses attached to the description of the analysis.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No, nor is it the norm to make such a statement.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Yes, since the authors provide a full report on all knowledge areas and awareness levels, as well as answering the research questions presented. The results are presented in a logical and concise form.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
No ethical concerns per se, except that research ethics are not addressed in this publication. The researchers follow common rules for anonymization in that they do not specify specific municipalities (it just says "three municipalities in southern and middle parts of Sweden" on page 120). Even so, the researchers should have openly addressed common ethical concepts such as informed consent when making use of questionnaires answered by preschool teachers.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
As noted in question C4, the researchers do not as such reflect on why they chose this overall research design. However, they justify the use of the specific questionnaire instrument, and the application of quantitative methods to investigate correlations between teachers' choice of mathematical content and the ages of the children taught seems reasonable. A further investigation into teachers' practices and their reasons for choosing particular activities (e.g. through interviews or observations) would provide additional insights, but this is not a criticism of the method applied in this study. For the purposes of answering these particular research questions in a short research article, the methodology is meaningful and justified.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The researchers address the reliability of the self-report questionnaire on page 128 where the potential risks to the reliability of the answers and the possibility of teachers using the questionnaire as a self-tutoring material are openly presented. The authors state that "Conclusions drawn from our study have to be considered in relation to this risk, but should also be valued as showing tendencies in

pedagogical practice and as a basis for further study" (page 120). This a valid way to handle a potential reliability issue, which reflects a good awareness from the authors' side regarding the importance of transparently presenting potential flaws and taking such flaws into consideration when forming conclusions and assumptions surrounding generalizability. In terms of the response rate attained for the questionnaire, a 79 % rate is satisfactory. The instrument used is not tested for internal reliability using Cronbach's Alpha, however its' reliability is addressed in that the authors describe developing it on the basis of theoretical concepts, drawing on the structure of the Early Childhood Environment Rating Scale, ECERS.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. As previously mentioned, an analytical strategy showing why specific statistical concepts are used is not presented. This means that the transition from describing the instrument to presenting the results seems somewhat abrupt (see page 121). Apart from this lack of a clear-cut strategy for the analysis, the analysis in itself is transparently presented and follows a logical order. All relevant numerical data are presented, including levels of significance and tables. The reader is informed that a Mann-Whitney U test is used to test for differences between groups (however the reasons for this choice as well as the overall functions of the Mann-Whitney U test are not presented). When comparing two groups, large differences in sample sizes may in some cases cause problems. The two groups compared in this study consist of 30 and 75 respondents respectively. Thus, one group is more than double the size of the other. The potential influence of this is not addressed by the authors, however a look into the properties of the Mann-Whitney U test reveals that differences in sample sizes are acceptable for this particular test. This shows that the authors' choice of a Mann-Whitney U test is valid and justified. However, this piece of information should have been provided by the authors. Overall, the analysis follows a logical flow, where all relevant areas are addressed in turn, and theoretical concepts are meaningfully applied.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
This is a relatively small-scale questionnaire study, and as such, it is not intended to rule of sources of bias or potential alternative explanations. The purpose is to provide insight and form the base for further studies. As previously stated, the authors are aware of potential reliability issues pertaining to the use of a self-

report questionnaire, and take these risks into consideration by being careful and modest in their conclusions. Thus, potential biases are validly handled, and the range of the study is not exaggerated.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
The study conclusions are modestly presented as showing tendencies in pedagogical practice and forming the base for further studies (see page 128).
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The results of the study are explicit, and they are presented in a coherent, logical form. The findings are discussed in relation to relevant theoretical concepts and other research findings. There is a red line running through the study, connecting the aims and research questions, contextual descriptions, theory, methodology, analysis and conclusions into a coherent whole. The authors make some considerations on research quality issues, and the conclusions drawn are modest and in line with the scope of this relatively small questionnaire study. Reviewer 2: The study, methods and data are presented in sufficient transparency, and the findings and conclusions seem sound and valid.

ID 27440531: Björklund, (2016)

Björklund Camilla, and Barendregt Wolmet. 2016. "Teachers' Pedagogical Mathematical Awareness in Swedish Early Childhood Education ". *Scandinavian Journal of Educational Research* 60(3):359-377.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on March 20th, 2017.
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
Possibly part of a broader study, but information is not clearly provided.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The purpose of this study is to give an overview of teachers' current pedagogical mathematical awareness.
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
The National Research Council grant nr. 724-2011-751. (Vetenskapsrådet)
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
Descriptive statistics in the form of frequency tables.
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Mathematical content
 - Curriculum
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
Mathematics

- Working with control documents
Swedish curriculum regarding mathematics
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The Swedish national context is described, including the preschool curriculum. Other studies within the research field are also described, and the theoretical context is well established.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
Aims and research questions are provided, and their relevance is argued for. The purpose of the study is to give an overview of teachers' current pedagogical mathematical awareness.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is briefly, but adequately described. The response rate is provided and assessed by the authors. The choice of sample size is not argued for. It is stated that questionnaires were distributed to 147 preschool teachers from three municipalities in southern and middle parts of Sweden. The response rate is provided (79%, equaling 116 complete answers).
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The questionnaire is described, including the theoretical thoughts behind it. Its' construction is described in detail, and a copy of the questionnaire is provided in the appendix, which allows for good transparency.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The theoretical concepts for the analysis are presented in good detail and clarity. Graphs are provided for frequency presentation. The researchers do to an extent discuss the credibility of their findings, e.g. when addressing respondent subjectivity on page 366 and 371.
 - C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment
Overall, the study is described with adequate transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement is made.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors make a full report on all aims and research questions.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
No specific concerns, however the subject of ethics is only touched upon very briefly (on anonymity, page 367).
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The researchers do not discuss the choice of using a questionnaire, and do not consider alternative methods. However, the use of a questionnaire to create an overview and to form the basis for further studies seems appropriate and sensible.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The researchers do not take the subjects of validity, reliability etc. into consideration per se, but do make some comments on e.g. respondent subjectivity. They present their methods (questionnaire, sampling etc.) openly, allowing the reader to assess the research process. There are no apparent problems concerning the methodological procedures.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The theoretical framework for analysis is well presented. Graphs are used to illustrate the findings, and response frequencies are described and discussed. There is some consideration of reliability, validity and trustworthiness, but no extensive or detailed comments on these subjects.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)

- A little, please justify assessment
The study aims to present a tentative overview, not to rule out sources of bias. There is some consideration of respondent biases.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The results and conclusions are presented with adequate modesty, and the range of the study is not over-stated. The results and conclusions are in sync with the aims and research questions presented (good coherence). The findings and conclusions reflect theoretical discussions. There is some consideration of credibility. Reviewer 2: The study is thorough and is overall reported in a transparent way with sufficient descriptions of the method of data collection and analysis. The results are also reported in sufficient detail and the discussion and conclusion are reflected and sound.

ID 27440729: Björklund, (2016)

Björklund Camilla, Nilsen Malin, and Samuelsson Ingrid Pramling. 2016. "Berättelser som redskap för att föra och följa resonemang". *Nordisk Barnehageforskning* 12:.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
April 10, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
It is stated that the data used in this study are part of a collaborative study between the University of Gothenburg and Moscow City University, in which data were collected in both Sweden and Russia. However, this article only presents results from the Swedish study. (see p. 2)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The aim of this study is to identify different ways of reasoning when preschool children create stories based on a given theme and with both a traditional and an unfamiliar framework for stories.
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
 - A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
 - A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
 - A10: What is the design of the study? (multiple coding allowed)

- Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Report of diary (field notes)
Notes of the children's ongoing comments while drawing were conducted.
 - Collection of data from day-care (minutes of meeting, calendar etc.)
The children's drawings were collected.
 - Sound recording
The children's verbal stories were audio recorded.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
The participating children were all five years old. (p. 5)
- A14: Who informs the study? (multiple coding allowed)
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
The participating children were all five years old. (p. 5)
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Perspective of the child
 - Other, please specify
Preschool children's storytelling and their ways of reasoning when creating stories based on a given theme.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)

- Yes, please justify assessment
Both the theoretical frame of the study, previous research on children's storytelling, reasoning and literacy, and the Swedish context in which the study is conducted are described (see p. 2-5).
- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of this study is to identify different ways of reasoning when preschool children create stories based on a given theme and with both a traditional and an unfamiliar framework for stories.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
It is merely stated that 17 children from two preschools participated. The children were all five years old and spoke Swedish. (p. 5) It is not stated how many preschool teachers participated, and the study provides no information on sampling strategy.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There is sufficient information about the data collection, and the narrative task is described in detail at on page 5-6. It is stated that the children's verbal stories were audiotaped, and that the children's ongoing comments while drawing were noted. In addition the children's drawings were collected. The data collection for each child was conducted by a preschool teacher that knew the child, however it is unclear how many preschool teachers participated in the study.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The process of data analysis is described at page 6-7.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. However, the study lacks a thorough description of the participating children and preschool teachers, and how they were selected for the study.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
All the research questions and relevant issues are reported on, and a breadth of

the data material is presented. A qualitative study like this is not able to rule out all forms of reporting bias, but in this case the reporting seems trustworthy.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that the parents of the participating children provided their written consent, and that the researchers paid regard to the children's own decisions of participating or not. The participating children's stories were anonymised by the participating preschool teachers/researchers (p. 6). The authors do not further discuss ethical aspects of their study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The method seems very well suited for gaining insight into the overall theme and research questions of the study.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. There is sufficient information about data collection, and the authors provide detailed information on the drawing/narrative task. The children's verbal stories were audiotaped and their ongoing comments were noted during the task. Finally, the children's drawings were collected and analysed together with transcriptions of the audiotaped stories and notes on the children's comments. This makes it easy to know what and how they have collected the data material. Nevertheless, a thorough description of the participating children and preschool teachers, and how they were selected for the study should have been provided. The authors briefly accounted for the limitations of the data collection on page 5: "However, the empirical material lacks information on the children's previous experiences with storytelling and what forms of narrative structures they experienced in other contexts. The study should be seen as a random pick among children in Swedish preschool, with no intention to generalize children's narrative skills, but however, with the aim to focus attention on children's reasoning in a particular narrative task."
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Triangulation across data sources is regarded as a plus. Throughout the analysis examples of the children's drawings and stories are presented to illustrate the authors' interpretations which are also regarded as a plus. Also, the theoretical

approach seems to be well suited to examine the data. Theories are used to reflect upon the findings.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
A qualitative study like this is not able to rule out all forms of reporting bias, but in this case the reporting seems trustworthy.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
It is stated that "The study should be seen as a random pick among children in Swedish preschool, with no intention to generalize children's narrative skills (...)". See p. 5.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The study is solid and has clear research questions, a suitable method which is described sufficiently, and the analysis process is transparent. The results are presented with sufficient details and the conclusions seem sound and valid based on the presented findings.

ID 29255291: Boyd (2016)

Boyd Sally, and Ottesjö Cajsa. 2016. "Adult Monolingual Policy Becomes Children's Bilingual Practice: Code-Alternation among Children and Staff in an English-Medium Preschool in Sweden". *International Journal of Bilingual Education and Bilingualism* 19(6):631-648.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
1/6-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
Swedish Research Council p. 646
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - One-to-one interview
 - Report of diary (field notes)
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
 - Children 4 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
 - Children 4 years

- Parent
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The theoretical and political context of the study is clearly outlined.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
It is clearly outlined in p. 632. "Our study examines the local bilingual practices of both staff and children in interaction, in the light of the preschool's twofold English policy and its English language profile. In this way, we hope to complement existing studies of bilingual and multilingual children's interaction in families and schools, including the other studies presented in this volume."
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The case chosen for this case study is a class of 25 children in an independent preschool with an English profile. It was outlined what an independent preschool with an English profile was in p. 634. Participants from the preschool were recruited. The number of participants has been outlined in p. 636, however, it was unclear how these participants were recruited/approached. The age of the participating children is somewhat unclear. In p. 631 and 632 the authors write that the children's age are 3-4 years. In page 634 the children's age is referred to as being 3-5 years.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
The authors outlined that the data collection involves observation, informal conversations and interviews. It is outlined that the interviews are semi-structured and centered around specific topics. But it is unclear if the interviews were carried out in groups or individually. The video recording focused on free play, snack time and the parents' picking up their children. How the video recording was carried out was unclear e.g. was a researcher filming or was the camera static and set to record in a certain area?
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The process of data analysis is outlined from p. 636 and has been divided into two parts: 1) an analysis of the interaction between staff and children, and 2) an analysis of the interaction between the children. It is, however, unclear how some aspects of the analysis were handled in practice e.g. were the two authors involved in data analysis? Was the data analysed independently by the two authors and then compared between the two? Or was the analysis a joint collaboration between the two authors from the outset?
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - No, please justify assessment
As outlined in C4, C5 and C6 some information on the recruitment of the sample, data collection and data analysis was missing, e.g. the age of the participating children is somewhat unclear.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in this kind of qualitative research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The authors do not address avoiding selective reporting bias. They use a qualitative approach and they do not outline if the data analysis was compared between the two independent authors/researchers. It cannot be assumed that the authors have avoided selective reporting bias.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
There is not much information on ethics in the study e.g. informed consent. However, the authors outline that they did not include information on the participants' language in order to ensure anonymity, p. 634. Thus, some ethical

considerations were made. Nevertheless, a study including video observation of such young children should have accounted for how informed consent was received from the participating children (and their parents), and if the participants were free to withdraw from the study at any time.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
An ethnographic approach was an appropriate design to address the research question which investigated the local bilingual practice of both staff and children in interaction.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Even though the chosen preschool for the study is described rather detailed, there is confusion about how the participating children and teachers were selected, and the age of the children is somewhat unclear. The authors provide general information on the data collection, but there is also important information missing here. The authors write that the data involved 12 hours of video recordings of spontaneous interaction in the preschool and in the playground. The authors write that the data was recorded periodically over a 2-year period. It is unsure when the data was collected during this period. How many visits (or number of video recordings) were made in the preschool? In addition as outlined in C4 it is unclear if the interviews were carried out in groups or individually.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analysis is described briefly, but it is sufficient to give the reader enough information about the categories used for analysis and how it was conducted. Also, through showing raw data and analyzing it in the article text, the reader gets a good insight into how the material was analyzed.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The authors do not seem concerned with ruling out bias. The authors are investigating the LOCAL bilingual practice in one preschool class and they are not claiming to investigate generalizable tendencies.
- C14: Does the author address the generalizability of the study? (only one coding allowed)

- Yes, the author concludes that this study is not generalizable
In p. 645 the authors write that the preschool's twofold language policy cannot directly be applied to other educational contexts.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
- No, please justify assessment
Reviewer 2: Even though there is some missing information about the participants and how they were selected, and even though some important information about how the data was collected is also missing, the findings presented are analyzed in a transparent way, and the conclusions based on them seem relevant and sound.

ID 27412432: Bro (2016)

Bro Ladegaard Louise. 2016. "Små, store eller måske rettere mellemstore organisationer? En undersøgelse af sammenhængen mellem ledelsesspænd, ledelsesidentitet og brugen af transformationsledelse i danske daginstitutioner". *Politica* 48(2):158-178.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on March 24th, 2017.
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
No, however this study must be linked with a study from 2015 entitled: "Ledelsesspænd på daginstitutionsområdet" by Holm-Petersen et.al (2015). This study was included in the 2015-review.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Danish
 - A6: What is the purpose of the study? (only one coding allowed)

- Exploration of relationships
The connection between various leadership variables and the use of transformational management.
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)

- Organization and management
- B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Management
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The author offers good descriptions of the Danish context and relates the study to other research contributions. She explains why the topic is investigated in this particular context.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
Aims and hypotheses clearly reported. The purpose of the study is to explore the connection between various leadership variables and the use of transformational management.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
There is a good description of the sample as well as the reasons and procedures for selection. There could have been more consideration of drop-out (systematic or not), but apart from this, the information given is definitely adequate. The empirical data consist of questionnaire responses from staff and managers from daycare institutions. The statistical analyses are based on responses from 118 managers and 830 staff members.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Good description of data collection methods and settings.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Hypotheses tested are clearly described. All tests of variables and relationships are adequately presented. Statistical models are illustrated and explained. The main theoretical model, which is tested, is described and illustrated in depth.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, very good transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports on all variables and hypotheses presented.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
No concerns, but information on the subject of ethics is not provided.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The researcher justifies and explains the methodological choices made.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The researcher discusses the necessary methodological challenges and argues for all the choices and adjustments made. Statistical tests of variable robustness are performed and the author discusses how to measure relationships most accurately (which respondents to ask, the choice of including both leader and practitioner responses). Control variables are explored. Instruments for measurement are described and tested (e.g. Cronbach's Alpha).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The method of analysis is described and illustrated. Sufficient data are presented. The data material is critically assessed, and the author discusses what the study can and cannot describe.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
All necessary statistical tests and controls are performed and the associations

found are critically assessed. The author discusses the scope and generalizability of the results, and considers alternative explanations or factors.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The author discusses this issue on page 172. Her assessment is that the study does not necessarily say anything about other daycare units nor about other public sectors that may function differently. One could argue that the study is generalizable in a contextual or conceptual way, and also that the results may be relevant to other groups with similar characteristics.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The author is critical towards her own methods and analyses. She discusses flaws and alternative explanations. There is good internal coherence in the study. All necessary tests and procedures are performed. The findings are explicit and reflect careful methodological and theoretical considerations.
Reviewer 2: No.

ID 27417262: Cameron (2016)

Cameron David Lansing, and Kovac Velibor Bobo. 2016. "An examination of parents' and preschool workers' perspectives on bullying in preschool". *Early child development and care* 186(12):1961-1971.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
14/3-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
Parents and childcare workers received questionnaires.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 3 years
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Parent
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)

- Health
 - The main topic of the study is bullying in the preschool.*
- B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
 - The context of the study is adequately described: both the current practice is described (political context) and research related to perspectives on bullying in preschools is presented.*
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
 - The purpose of the study is clearly outlined. Moreover, the purpose is repeated throughout the study. "The aim of the study was to explore and compare the perspectives of parents and preschool teachers with respect to (a) the existence of bullying in preschool, (b) the definition of bullying, (c) the role of the bully and the victim, and (d) perceptions of gender differences with regard to bullying. Given the explorative nature of this investigation, we seek first and foremost to provide a broad picture of these conditions that can offer insight into the challenges of bullying in early childhood for practitioners, parents, and future researchers." (p. 1962).*
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
 - The sample and how it was recruited is clearly outlined in p. 1962-1963. The characteristics of the sample were also outlined.*
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
 - The method of distributing the questionnaires and collecting them was clearly reported in p. 1963-1964.*
 - C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment
There was transparency regarding the data analysis.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The study is reported with great transparency and detail. Moreover, it is written in a clear and concise language. Reviewer 1 has no issues regarding transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice for many studies.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors are addressing the aim that they were setting out to answer. The authors address the issue of socially desirable answers. They write that this can influence the results i.e. the attitudes of parents and childcare workers.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
No children were directly involved in the study. The authors do not address ethics.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The attitudes of child care workers and parents were explored by comparing questionnaire data from both groups. It is likely that qualitative nuances are missing in the questionnaire. It could have also been possible/interesting to compare the two groups with a qualitative design. However, it would have been a greater challenge to include a great number of participants.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors have addressed the issue of validity by providing a pilot test of the questionnaire (p. 1963).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analysis was described adequately and it would be possible to replicate this. The sample appeared adequate in terms of the reliability of the results: It included 141 parents and 81 preschool teachers. The authors analysed individual items in

the questionnaire but they also analysed broader measures of a particular concept. The authors achieved the latter by collapsing multiple items. In this instance, the authors considered the issue of internal reliability of this new measure p.1964.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
Reviewer 1 wonders why the authors have used a 7 point Likert scale and not a five point Likert scale (three levels of agree and disagree compared to two levels of agree and disagree). It is likely to have increased differences in opinion that are in fact arbitrary. The participating parents and staff were not randomly selected, thus, the data collected could be skewed. There is a risk that people who believe their own child is bullied have filled in the questionnaire. In other words the non-random selection of participants may lead to a skewed response. The authors have otherwise conducted a great study. The questionnaire was piloted.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The authors write about the generalizability that "future research should consider collecting data from a large number of preschools and regions to ensure more reliable generalization of findings" (p. 1970).
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The conclusions seem viable and are in line with previous research in the area. Moreover, the authors are cautious in the conclusions of the study and they outline the limitations of the study.

ID 27392440: Emilson (2016)

Emilson Anette, Folkesson Anne-Mari, and Moqvist-Lindberg Ingeborg. 2016. "Gender Beliefs and Embedded Gendered Values in Preschool". *International Journal of Early Childhood* 48(2):225-240.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
It is stated that the present study is part of a larger Nordic project (the research project "Values Education in Nordic preschools: Basis of education for tomorrow", Project No. 53381) which aims to deepen understanding of the institutionalised fostering of values in Nordic preschools. One focus in the project is directed towards gender issues in values education. (p. 227)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description

The aim of this study is to explore practitioners' gender beliefs and how gendered values are embedded in Swedish preschool practice. The research question is: What beliefs about gender and the associated values, can be identified in practitioners' talk when they discuss gender issues? (p. 227)
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder

It is stated that NordForsk funded the project "Values Education in Nordic preschools: Basis of education for tomorrow" of which the present study is part of. (p. 239)
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Focus group interview

10 semi-structured group interviews with practitioners in eight Swedish preschools were conducted.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

The study includes all staff working with children in preschool, regardless of educational background (preschool teachers or nurses).
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

The study includes all staff working with children in preschool, regardless of educational background (preschool teachers or nurses).
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable

- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Equal opportunity
Gender equality and children's rights to equal opportunities.
 - Curriculum
Value dilemmas related to the implementation of curriculum goals.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Basic values and/or ethics
Gender equality: The overall focus of the present study is on preschool practitioners' beliefs about gender and their values about gender.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Inclusion/exclusion
Gender equality and children's rights to equal opportunities.
 - B4: The institution in society (multiple coding allowed)
 - The institution in society

- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The study is linked to previous research on values and gender in a preschool context, and it is informed by Bronwyn Davies' theoretical ideas that gender is socially constructed and her concepts of category maintenance and transgression are discussed. (see p. 228-229)
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
In order to understand how gender and values can be related in the preschool context, the aim of this research is to gain greater knowledge about practitioners' gender beliefs and the embedded nature of the associated values in Swedish preschool practice. The research question in focus is: What beliefs about gender and the associated values, can be identified in practitioners' talk when they discuss gender issues? (p. 227)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
The study lacks a thorough description of preschools and the participating practitioners, their educational backgrounds, their pedagogical knowledge in relation to gender equality, children's ways of doing gender in preschool etc. Seeing that the study included all staff working with children in preschool, regardless of educational background, this information could with advantage have been provided and the authors could have related their findings to

background variables. Moreover, the authors do not provide any information on their sampling strategy or the selection criteria. It is merely stated that "The fieldwork in this research took place in eight different Swedish preschools participating in the Nordic research project on values. (...) Of the participants, 95 % were women and 5 % were men. The ages of the participants ranged from 20 to 65 years." (p. 229-230).

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment

Yes and no. It is stated that "ten group interviews were conducted as open-ended group discussions about values. (...) There were approximately seven practitioners in each participating group together with one researcher who led the group. (...) Since the data for the analyses in this paper were drawn from the larger project about values education in preschool, then the semi-structured interview guide for the groups addressed a range of issues in relation to values education, in general. One theme in the interview guide regarded gender issues and it is this part of the interview data that is the focus in this study." (p. 229-230) However, examples from the interview guideline are not presented.

- C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment

The theoretical frame of the analysis is described at p. 229: "To interpret practitioners' gender beliefs, we use Davies' concepts of category maintenance and transgression. Category maintenance is directed towards how the categories of men/masculinity and women/femininity are maintained in discursive practices, while transgression is regarded as exceeding these categories. Thus, in this research, we try to identify expressions of both category maintenance and transgression in order to explore how the categories of femininity and masculinity are maintained and taken for granted but also how these categories are challenged and transgressed into different ways of being a girl and being a boy in preschool." Furthermore, the process of data analysis is described at p. 230: "The interviews were audio-taped and transcribed for analysis. To generate the body of data for the analyses reported in this study, we searched the transcripts for keywords, such as, boys, girls, gender and sex. The paragraphs that contained talk about gender were marked and extracted for inclusion in a single document that comprised 17,630 words (44 pages). The analysis alternated between an inductive and deductive process for a qualitative content analysis (Hsieh and Shannon 2005). First, the material was read repeatedly in the inductive process with the purpose of identifying how the practitioners discussed gender at a descriptive level. Variations in the utterances about gender were marked with different highlighted colours to generate tentative categories that could be related

to values about gender. Second, the analysis then became more deductive, in character, in which the concepts of category maintenance and transgression were specifically identified as primary analytical tools (Davies 2003). The analysis process resulted in two categories at a level between a descriptive empirical level and a theoretical interpretative level. These categories were viewed as empirical clarifications of Davies' theoretical concepts, abstracted as duality and neutrality beliefs." Moreover, the study identified three value dilemmas embedded in the practitioners' gender beliefs: (1) Gender as a social construction and/or as a biological reality; (2) Transgression of traditional gender roles versus following the child's own interest and (3) Femininity as a desirable value for boys but not for girls (p. 236). However, it is not stated whether the process of data analysis included more than one researcher/coder?

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. However, the study lacks detailed descriptions of the preschools, the participating practitioners and the sampling strategy.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Overall, it seems like the whole breath of the data is presented, and the arguments are exemplified with relevant quotes from the interviews. However, since the different respondents have not been given a code to separate their statements from each other, we don't know if the whole data material and all approximately 70 practitioners are represented equally in the findings.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that "Ethical considerations were taken into account and the study met the required ethical requirements (The Swedish Research Council 2002). Written informed consents for the practitioners' participation were obtained." (p. 230). The authors do not further discuss ethical aspects of their study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. The present study is a qualitative study exploring the ways in which preschool practitioners express gender beliefs and gendered values. Thus, the aim of the study was explorative and the research methods were explorative.

Therefore, semi-structured group interviews seem appropriate, though it would be valuable to make observations to find out more about how gender beliefs could be observed in interactive situations with children and practitioners. This is also addressed by the authors themselves (see p. 239).

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. It is stated that "ten group interviews were conducted as open-ended group discussions about values. (...) There were approximately seven practitioners in each participating group together with one researcher who led the group. (...) Since the data for the analyses in this paper were drawn from the larger project about values education in preschool, then the semi-structured interview guide for the groups addressed a range of issues in relation to values education, in general. One theme in the interview guide regarded gender issues and it is this part of the interview data that is the focus in this study." (p. 229-230) However, examples from the interview guideline are not presented.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. Data from the group interviews was analyzed qualitatively using a qualitative content analysis resulting in two categories at a level between a descriptive empirical level and a theoretical interpretative level. These categories were viewed as empirical clarifications of Davies' theoretical concepts, abstracted as duality and neutrality beliefs. The process of data analysis is described at page 230. However, it is not stated how many researchers were involved in the coding and analysis of the collected data. Also, the authors do not mention interrater agreement of the final coding and categories. Throughout the analysis examples of the practitioners' statements from the interviews are presented to illustrate the authors' interpretations which are regarded as a plus. Also, previous research findings are used to reflect upon the results of the present study. However, the authors could with advantage have described the participating practitioners in greater detail and related their findings to different background variables.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The study has some limitations which are also addressed by the authors themselves (see p. 238).

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
P. 229: "We do not relate the findings to different preschools". P. 239: "(...)we cannot say anything about how widespread these beliefs are. Some of them might be more prevalent than others across different preschools."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Based on the findings presented in the article the discussion is relevant and the conclusions seem sound. The authors also identify limitations of their study and as such make their own reservations, and suggest other methods for further research on the issue that might give other and more thorough insights into the theme.

ID 27924220: Granrusten, (2016). Strategisk ledelse av barnehagen som læringsarena

Granrusten P T. 2016. Strategisk ledelse av barnehagen som læringsarena. In *Barnehagen som læringsarena: Mellom styring og ledelse*, edited by Moen K H, Gotvassli K Å, and Granrusten P T.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
22/6-2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The study is part of an anthology: Moen et al (2016). Barnehagen som læringsarena: Mellom styring og ledelse. Oslo: Universitetsforlaget
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
Norwegian Research Council (Norges Forskningsråd) p. 24
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Leadership/management
Kindergarten leaders (barnehagestyrere)
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
Kindergarten leaders (barnehagestyrere)
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - Policy
 - Economy
This entails 1) the resources that the institutions were granted and 2) the competition in the daycare marked (private sector daycare)
 - B2: Main educational feature(s)? (multiple coding allowed)

- Not relevant, this study does not have any main educational feature
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
- B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
This study is very similarly structured as Granrusten 2016, chapter 12. The context of the study is described very well. The author describes the political background of the study and he also outlines theories, concepts and research that can be used in the analysis.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The research questions of the study have been clearly outlined in p. 235. The questions are: How do managers perceive the strategic management? What is their strategic focus in the mangement of the kindergarten as a learning arena? The author has explained the analytical approach to the questions in p. 243. But the author has not as such explained the research questions in further detail. However, the research questions are also very clear so further detail is not needed.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The author has described the sample e.g. number of participants and that the leaders were from small, medium and large kindergartens. Moreover, he has made a reference to Skjæveland if the reader wants further details on gender distribution etc. Skjæveland has also pointed out how the participants were recruited: the recruitment was carried out in collaboration with the kindergarten administration in the three municipalities.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There was an adequate description of the data collection. Granrusten has outlined

some of the questions and focus areas in the interviews with the leaders p. 243. Skjæveland has outlined the length of the interviews.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There is an adequate description of the analysis. Granrusten has mentioned several concepts (e.g. generic and resource-based strategies) which were used in the analysis (p. 243). Granrusten has also mentioned that the data was analysed using a stepwise deductive-inductive method. The sentences are coded in sorting-based coding (p. 243) where the categories describe different themes. Thus, Granrusten has described the practical steps of the analysis. On a negative note, Granrusten has not specified how many researchers have analysed the data.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, this study is described in sufficient detail e.g. sample, data collection and analysis. Reviewer 1 would have liked more information on how many researchers were involved in the analysis, but generally the study was quite transparent.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The author has not directly addressed the issue of selective reporting bias. The researcher has answered the two research questions. Thus, the author has reported on what he set out to investigate in the beginning. This is a positive feature of the chapter.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Granrusten and Skjæveland have not addressed ethical considerations. Ethical considerations such as informed consent etc. have not been mentioned in the anthology. However, the reviewer has found no example of the authors obviously breaching ethical codes e.g. compromising the anonymity of the participants.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Overall, the research design (qualitative interviews with leaders) was ok for answering the research questions. The research questions called for an explorative approach thus a qualitative design was well suited for this. It seemed relevant to involve only leaders as participants. The research question aimed to

explore the leaders' views and approaches to strategic management in kindergarten.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The author has not directly addressed the issues of reliability and validity in the study. However, the data collection of the study was described adequately (see C4) so it was possible to replicate the study, e.g. the questions and focus of the interviews were outlined. Reviewer 1 can find no flaws in relation to the validity or reliability of the study.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The author has not directly dealt with the issues of reliability and validity. The analysis of the data is adequately described (see C5). The author does not address the validity of the analysis.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The author has generally made no considerations in relation to the limitations of the study. If the author had considered the weakness of the design he could have taken measures to strengthen the design. However, this was not the case. The sample size was relatively high for a qualitative study (16 participants). The anthology included leaders from both private and public kindergartens AND from small, medium and large kindergartens. This was a positive feature of the study. The sample generally seemed to be an ok basis for drawing conclusions.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The author has been cautious in the conclusions. He has not overstated the findings. He has also related the findings to previous research.

ID 27924210: Granrusten, (2016). Styrernes profesjonelle identitet

Granrusten P T. 2016. Styrernes profesjonelle identitet. In *Barnehagen som læringsarena: Mellom Styring og ledelse*, edited by Moen Gotvassli, and Granrusten.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
20/6-2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The study is part of an anthology: Moen et al (2016). Barnehagen som læringsarena: Mellem styring og ledelse. Oslo: Universitetsforlaget
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
Norwegian Research Council (Norges Forskningsråd) p. 24

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Leadership/management
Leaders (styrere) of kindergartens
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
Leaders (styrere) of kindergartens
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society

- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study is described very extensively. The author describes the political context of the study and he also outlines theories, concepts and research that can be used in the analysis of the findings.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The two research questions are clearly stated in p. 217. The author has not elaborated on the questions or explained in further detail. However, the research questions are also very clear so further detail is not needed. The questions are: Do the leaders perceive themselves as preschool teachers or preschool leaders? Does this influence their management of learning processes?
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The author has described the sample e.g. number of participants and that the leaders were from small, medium and large kindergartens. Moreover, he has made a reference to Skjæveland if the reader wants further details on gender distribution etc. Skjæveland has also pointed out how the participants were recruited: the recruitment was carried out in collaboration with the kindergarten administration in the three municipalities.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There was an adequate description of the data collection. Granrusten has outlined some of the questions and focus areas in the interviews with the leaders p. 223. Skjæveland has outlined the length of the interviews.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There is an adequate description of the analysis. Granrusten has mentioned several concepts (e.g. subject professional (fagprofessionell) and leading professional (ledelsesprofessionell)) which were used in the analysis (p. 222). Granrusten has also mentioned that the data was analysed with a stepwise deductive-inductive method. The sentences are coded in sorting-based coding (p. 222) where the categories describe different themes. Thus, Granrusten has described the practical steps of the analysis. On a negative note, Granrusten has not specified how many researchers have analysed the data. There were seven researchers in the anthology and one author of this article. Thus, it is likely that the number of people involved in the analysis is somewhere between 1 and 7.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, this study is described in sufficient detail. Reviewer 1 would have liked more information on how many researchers were involved in the analysis, but generally the study was quite transparent.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The author has not directly addressed the issue of selective reporting bias. The researcher has answered the two research questions. Thus, he has reported on what he set out to investigate in the beginning. This is a positive feature of the chapter.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Granrusten and Skjæveland have not addressed ethical considerations. Ethical considerations such as informed consent etc. have not been mentioned in the anthology. However, Reviewer 1 has found no example of breaching ethical codes e.g. compromising the anonymity of the participants.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Overall, the research design (qualitative interviews with leaders) was ok for answering the research questions. The research questions are well suited for a qualitative design and Reviewer 1 believes that a quantitative focus could not have improved the study. One could argue that the second question (How does the leader's identity affect the way the learning processes are managed?) could be investigated more validly by also asking staff of the leaders. Leaders might not be able to evaluate how they themselves manage the learning process in kindergartens. One could argue that merely focusing on leaders answers leaves the final question open to bias.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The author has not directly addressed the issue of reliability and validity in the study. However, the data collection of the study was described adequately (se C4)

so it was possible to replicate the study, e.g. the questions and focus of the interviews were outlined. There were no major problems in relation to the validity or reliability of the study. But one could argue that it would be relevant to also include the view of the staff (see C10). The author has not considered if the second research question was answered validly by the leaders only.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
The author has not directly dealt with the issues of reliability and validity. The analysis of the data is adequately described (see C5).
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
In this study the leaders are asked about their leadership and management of their kindergarten. Just asking the leaders about their management of the kindergarten can lead to socially desirable answers and bias (see C10). This issue is not dealt with by the author. In general the author has made no considerations in relation to the limitations of the study. If the author had considered the weakness of the design he could have taken measures to strengthen the design. However, this was not the case.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The reviewer cannot fault the conclusions of the study. The author appears cautious in his statements regarding the findings. In addition he has related the findings to previous research.

ID 27434055: Grøver, (2016)

Grøver Vibeke, Lawrence Joshua F, and Rydland Veslemøy. 2016. "Bilingual Preschool Children's Second-Language Vocabulary Development: The Role of First-language Vocabulary Skills and Second-language Talk Input". *International Journal of Bilingualism* :1-17.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun September 7th, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Rydland, V., Grøver, V. & Lawrence, J. (2014). "The Second-Language Vocabulary Trajectories of Turkish Immigrant Children in Norway from Ages Five to Ten: the Role of Preschool Talk exposure, maternal Education, and co-ethnic concentration in the neighborhood". Journal of Child Language, 41(2), 352-381.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Exploration of relationships
The influence of first-language vocabulary skills and second-language talk input on bilingual preschool children's second-language vocabulary development.
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
The Norwegian Research Council (grant number 218280).
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Longitudinal study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
Video-taping of circle time and peer play.
 - One-to-one interview
Telephone interviews with parents regarding demographics and language use at home.
 - Video
 - Other (please specify)
Vocabulary tests (Norwegian and Turkish).
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 5 years
Longitudinal study examining children's outcomes at multiple time points between preschool and fifth grade. This study focuses on results at age five.
- A13: In studies with children, which age groups are covered?
 - Age 3-6
See A12
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
Video-taping of teacher-led group talk
 - Children 5 years
Note that this is a longitudinal study including data from multiple time points, but

however focusing on results at five years of age. Data from ages four, five, six, seven and ten are used for reliable modelling.

- No information provided on the age of the children
Peers, ages not specified, but between three and five.
- Parent
Parents provide demographic characteristics and information on language use at home.
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Language development
 - Other, please specify
Bilingualism
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
Language learning for bilingual children
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The researchers discuss the contribution of the study to existing knowledge and relate their findings to other research contributions within the field. The authors argue well for the relevance of their inquiry on pages 3 and 5, where the current study is presented as addressing some of the limitations of previous research. The authors provide information on the conditions surrounding Norwegian preschools (e.g. the instruction policy for language-minority children, see page 6, and the focus on free play) as well as the background for the immigration of Turkish immigrants to Norway (page 6). The authors openly state the source of funding for the project.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
As described under C1, the relevance of this particular study is argued for by the

authors. The aims and research questions for the study are presented, as well as underlying assumptions and hypotheses (see page 5). The overall aim of the study is presented as examining "... whether five-year-old children with varying first-language (L1) vocabulary skills benefitted differentially from second-language (L2) teacher-led group talk and peer-play talk when acquiring L2 vocabulary in preschool settings" (taken from the abstract on page 1). The research questions are as follows: 1. How do preschool L2 learners with varying L1 vocabulary skills benefit from teacher-led talk in their L2 vocabulary development? 2. How do preschool L2 learners with varying L1 vocabulary skills benefit from peer-play talk in their L2 vocabulary development? 3. After controlling for parental education, how do preschool L2 learners with varying L1 vocabulary skills benefit from teacher-led and peer-play talk in their L2 vocabulary development?

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment

The researchers provide adequate information on the sample used. Demographic information is provided, as well as descriptions of the multi-ethnic neighborhoods in which the preschools were located. Characteristics of the participating preschools are also given (ages of children attending and typical activities during the day). The recruitment of participating children is shortly presented on page 6. The sample consists of 26 bilingual children, speaking Turkish (L1) and Norwegian (L2), distributed across 20 public preschool classrooms.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

The methods and procedures applied are adequately described. The vocabulary tests used are presented with indications of Cronbach Alpha scores. The video recordings made are described, as well as the data drawn from them (calculations of different talk variables). The reasons for performing the various calculations are explained. The use of control variables is also addressed.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment

The analysis consists of complex statistic modelling procedures. The different models tested are adequately presented (including tables). Explanations are provided for the analytical strategies used (the use of specific statistical models and measurements). The researchers critically discuss study limitations such as lack of causality and small sample size. They also present possible alternative explanations for the findings (potential unmeasured variables contributing to the results).
- C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment
Overall, the study is described with sufficient transparency, as reflected in the answers given in C1-C6.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
Such statements are not the norm in shorter research articles.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on the individual research questions presented as well as providing answers to the overall aim of the study.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
There are no ethical concerns per se, however the authors do not present any reflections on research ethics in the article. Seeing as testing procedures and observations on small children have been conducted, this is a rather serious flaw, notwithstanding the short article format.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The methodological choices made are reasonable and justified by the authors. The use of specific instruments for testing and calculations drawn from the observations are explained and justified. The authors could have chosen to include more children (a larger sample) or to further supplement the empirical data with qualitative elements. The authors themselves are aware of these possibilities and openly present potential limitations to the current study design.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors take several steps in order to ensure the reliability and validity of the data collection procedures. First of all, demographic information and information about language use at home is collected through telephone interviews with the parents. This is done to ensure that the participating families are actively maintaining use of the Turkish language at home. Regarding the instruments used, Cronbach's Alpha estimates (estimate of the reliability of a psychometric test/an internal consistency estimate of the reliability of test scores) for the vocabulary tests are calculated and are above the 0,70 mark usually considered "acceptable" in social science research. (At age 10, the estimate is 0,94, which may be an

indication of some items being redundant. This however seems a minor issue and is not mentioned by the authors). The authors choose to transcribe the play segments in which the children are most engaged, which seems a meaningful way to try and catch the full linguistic potential of the participating children. In order to attain comparable situations across the target children, the consecutive 20 minutes in which each child was most engaged in peer play are selected.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Firstly, in order to obtain as reliable estimates as possible of children's L2 vocabulary skills, the researchers use data from all time points to fit a longitudinal growth model. This is done "... because "as you add waves of data... the reliability with which change can be measured will improve" (page 8). Thus the authors actively attempt to reduce the impact of measurement errors. The authors control for maternal education as well as other control variables (paternal education, gender and length of preschool attendance) in their analyses. Tables are presented to support the analyses and to provide transparency as to the numerical foundations of the findings presented.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
As described in sections C11 and C12, the researchers apply various statistical procedures in order to ensure the reliability and validity of the study findings. Potential limitations to the study are openly presented, as well as possible alternative explanations for the findings. The fact that the relationships found between L1 vocabulary and L2 talk exposure on L2 vocabulary are correlational (as opposed to causal) is underlined by the authors, meaning that unmeasured variables may account for the results. The authors suggest e.g. more frequent switching between languages at home as a potential factor influencing the results, as well as possible "bi-directionality" and cross-linguistic relationships (pages 12-13). The authors also reflect on other possible alternative explanations (e.g. differences between preschool environments), as well as on the small sample size and limited measures of talk exposure used in the study (only one-teacher-led and one peer-play situation for each target child), see page 13. Thus, the authors take all the necessary precautions in terms of handling potential biases and alternative explanations, and report with full transparency as to the limitations of the study.
- C14: Does the author address the generalizability of the study? (only one coding allowed)

- Yes, the author concludes that this study is not generalizable
The following statement is made on page 13: "Based on the present study, we are not able to conclude whether the effects of interactions between L1 vocabulary and L2 talk exposure on L2 vocabulary appear similarly in other preschool situations, varying in formats and participants".
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings presented are explicit and aligned with the research questions and overall aims of the study. The conclusions drawn reflect theoretical discussions, and they are related to other research contributions. The researchers are careful when presenting their findings, and they reflect well on potential sources of bias and alternative explanations. Reviewer 2: No.

ID 29255305: Hannås (2016)

Hannås Bjørg Mari, Bahdanovich Hanssen, and Natallia. 2016. "Special Needs Education in Light of the Inclusion Principle: An Exploratory Study of Special Needs Education Practice in Belarusian and Norwegian Preschools". *European Journal of Special Needs Education* 31(4):520-534.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
06.09.2017
 - A2: Type of publication (only one coding allowed)

- Journal article
- A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
- A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - Yes, the study has a broad focus (please specify)
The study compared Belarusian and Norwegian practice with special needs education. The reviewers will only look at the Norwegian part of this study.
- A5: Publication language (only one coding allowed)
 - English
- A6: What is the purpose of the study? (only one coding allowed)
 - Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?

- Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Equal opportunity
 - Policy
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Working method/educational method
 - Intention and purpose
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Inclusion/exclusion
 - B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors have described the background of the study. They have referred to previous research and the structure of the Norwegian preschool sector is described.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The authors have clearly described the aim of the study. This aim also makes sense in relation to the data just related to the Norwegian part of the study. "The purpose of this study is to investigate possible practical consequences of the ideological principle of inclusion. In this article, we investigate, compare and discuss how employees of Norwegian and Belarusian preschools perceive their own, and their preschools', special needs education practices related to children with language difficulties." p. 520.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The authors have clearly described the sample of the study. They have elaborated on the sex, age and educational background of the five Norwegian participants (p. 524). The teachers were recruited from 5 different schools. The authors have also specified what the inclusion criteria for participation were. The participants were working with children with assumed LD in public preschools where they were integrated. The study's validity could however have benefited from information on the preschool teachers' seniority.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The authors have described the methods in p. 525. The method involved semi-structured one-to-one interviews with five Norwegian preschool teachers. The authors have even described the topics of these interviews in p. 525.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analytical approach is described in p. 525. The analysis of the entire study involves three stages but the analysis of the Norwegian part of the study involves two stages. The authors have also outlined the authors behind the analytical approach: Corbin and Strauss. It seemed that both authors were involved in the analysis since the authors use "we" e.g. "we identified different categories". It is however unclear how the two authors collaborated e.g. did they analyse the data independently and consequently compare the results or did they analyse the data together?
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The study is transparent. The authors have elaborated on the sample, method and analysis in great detail without irrelevant information. Overall the study was very clearly outlined.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common in this type of qualitative research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors have not taken any direct measures to avoid selective reporting bias. However, on a positive note, there were two authors involved in the analysis, thus, this could eliminate some bias. The authors have not specified if they independently analysed the data and then compared the results. This would have been a positive feature in relation to selective reporting bias.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The research project was registered and approved by the Data Protection Official for Research. All participants were given written consent to their participation. The anonymity of the participants was ensured, since the real names of participants and preschools were not provided.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Overall it was relevant to have an explorative approach (qualitative approach) to investigate the broad research question. However, it is tricky to answer this question because the original focus of this article is different from what the reviewers are looking at. The reviewers are merely looking at the Norwegian preschool teachers. The entire study is focusing on both the Norwegian and the Belarusian preschool teachers and comparing these two groups. The research question and research design is quite weak when one merely looks at the Norwegian preschool teachers. The data merely involves 5 interviews with 5 Norwegian preschool teachers.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
It would be possible to some extent to replicate the data collection. The data collection was described in great detail. Moreover, how the authors went about recruiting and approaching the participants was also outlined. The sample size is very small (5 Norwegian preschool teachers), thus, the validity and generalizability of the data collected is limited.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment

The analysis was described and it would be possible to replicate this process. It seemed that the two authors analysed the data in collaboration. It would have been a very positive feature if the two researchers analysed the data independently and then compared the results. The authors outlined that they attempted to ensure the validity of this investigation by presenting and discussing parts of the study at various seminars, and with independent scientists. It is unclear how this process took place. Indeed it is unclear if the authors did get feedback on their study which made them alter aspects of their findings. Indeed if they did alter aspects of their findings, it would be relevant to include which aspects were commented and changed.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - Not at all, please justify assessment

The research design is not very strong. This is primarily due to the small sample size. The sample size involved interviews with five Norwegian preschool teachers. The authors mentioned that they presented the study for independent researchers and in seminars to ensure the validity of the results. But if this procedure did indeed provide any useful feedback is unclear.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment

The authors are generally quite cautious in their conclusions.

ID 27392462: Haraldsson (2016)

Haraldsson Katarina, Isaksson Pernilla, and Eriksson Monica. 2016. ""Happy when they arrive, happy when they go home" : Focusing on promoting children's mental health creates a sense of trust at preschools". *Early years* :1-14.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 28th of September, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Ministry/government/local government, please state the name of the funder
Region Halland, Sweden
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Action research
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Focus group interview
 - Collection of data from day-care (minutes of meeting, calendar etc.)
It is stated: "The documentation consisted of the support processes the teachers brought to their own preschool during the education, supplemented with documentation from a template developed for the present study." (p. 4)
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Health

- Day-care quality
- Pedagogical practices
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Assessment, evaluation, quality assurance and development
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Learning organization
 - Social system
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors relate the study to other studies within the field and they draw on different theoretical perspectives on mental health which allows the reader to better understand the importance of this study. Region Halland, Sweden, funded this study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study as well as the relevance of it is presented. The aim is to examine the impact of a specific course on mental health promotion among preschools teachers.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Information on sample size and description of the sample are presented. The authors have reflections about the sample in relation to the credibility to the study results. No information given on the identification nor recruitment of the participants.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment
This study is based on a course where the data is collected through documentation and group interviews. The content of the course is clarified. The researchers have given an insight in the instructions regarding the documentations and in the guideline for the group interviews. However, no reflections are shown regarding the researchers' possible influence during the data collection. Furthermore, the amount of the documentation is unclear.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
A clear strategy for the analysis is provided. It is presented how the analysis was being carried out (an example is provided on page 4) including how the findings will be presented in the study. Furthermore, the authors reflect on their role during the data analysis.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The aim and the context are clear. The information given on sampling, research methods and analytical procedures is transparently reported.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors are achieving the aim with the study. The process is clarified and justified. Besides, the researchers reflect on their role during the data analysis.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The study was approved by the Ethics Committee at the University of Lund. Informed written consent was obtained.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design per se seems appropriate in relation to the aim of this study. The research design is clarified and justified as well.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, the methodological procedures are adequately described. Information

and reflections on sample size are provided. However, the researchers do not reflect about their potential influence on the data collection.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Analytical strategy is provided. Sufficient data is presented to support the findings. As stated on page 4-5: "All of the authors, who are familiar with qualitative content analysis and with public health and/or mental health promotion, participated throughout the analysis until consensus was achieved." This strengthens the interpretations and categorizations of the data. Furthermore, the researchers reflect on their role during the analysis.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The research design and the chosen methods are meaningful in relation to the aim of the study. The methodological and analytical procedures are transparently reported and the descriptions of the findings are reasonable. Furthermore, the researchers reflect on their positions during the data analysis.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
No such statement nor reflections.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. The study is presented with adequate transparency and the findings and conclusions seem sound and relevant in light of the results presented. Reviewer 2: No. The results seem to be plausible, even if it is unclear how the categories and sub categories have been developed. Here we have to trust the authors more than being convinced by them. I would have liked to have more information about how the meaning units were defined and the status of the excerpts in relation to the whole text material they analysed. The authors report that the teachers seem to have changed their work practise in a way very favourable for the children. This indicate that the course was very useful and valuable. The most severe problem with the article is that at least one of the authors (the first author, see page 3) led the course. This might produce a risk of problems when the same author should document the results. I miss also some information about the course, for example who were paying for it, who were deciding whom was offered to participate, what type of relations developed

between the leaders of the course and the participants etc. Maybe I am too paranoid, when I have to mention these worries.

ID 29255308: Hofslundsengen (2016)

Hofslundsengen Hilde, Hagtvet Bente Eriksen, and Gustafsson Jan-Eric. 2016. "Immediate and Delayed Effects of Invented Writing Intervention in Preschool". *Reading and Writing: An Interdisciplinary Journal* 29(7):1473-1495.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on October 2nd, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - "What works"
Immediate and delayed effects of an invented writing intervention in preschool
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- University/research institutions, please state the name of the funder
Sogn og Fjordane University College
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Experiment with non-random allocation to groups (quasi-experiment)
"The current study employed a quasi-experimental pre-test post-test design to evaluate the effect of the intervention" (page 1478).
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Other (please specify)
Testing of children's phoneme awareness, spelling sentence writing, word reading, receptive vocabulary and letter knowledge. Intervention and control groups.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 5 years
Children five years old in preschool, tested pre, immediate post and six months later (where some of them would then be six years old)
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Children 5 years
Children five years old in preschool, tested pre, immediate post and six months later (where some of them would then be six years old)
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Writing and emergent literacy skills
 - Transition from day-care to school

- Other, please specify
An intervention program targeting writing and emergent literacy parameters (language and literacy)
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working method/educational method
An invented writing intervention
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors discuss the study in relation to relevant research studies, thus linking their work to an existing body of literature on early literacy. The Norwegian preschool context is described, as well as the overall structure of the Norwegian language (a semi-consistent orthography) and what this structure might entail for the early learning of reading, spelling etc.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The authors provide clear descriptions of both the overall purpose of the study, as well as specific research questions and hypotheses. The relevance of the study is well argued for. The specific research questions for the study are presented on page 1476 and are as follows: 1) Does a 10-week invented writing program for five-year-olds carried out during the last term in preschool influence their phoneme awareness, spelling and word reading skills in preschool? 2) To what extent does an intervention effect in preschool affect early spelling and reading skills in school?
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is described on page 1478, where both the achieved sample size and drop-out numbers are presented. The sample consists of 105 children with a mean age of 5,7 years at pre-test. The children are nested in 12 preschools, and randomization to either the control or the intervention group occurs at the preschool level. The authors test for any initial differences between the two

groups (no significant differences in parental education, gender, family size, home language or amount of shared book reading time, according to parent reports). The authors do not clarify how the 12 preschools were selected.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The authors provide clear descriptions of both randomization procedures, measures (testing) and features of the intervention program. These descriptions are presented in pages 1478-1482 and are of good length, meaning that the reader is given an adequate insight into the whole research process and the nature of the individual steps during the process. E.g. examples are provided of the activities carried out during the intervention. In pages 1482-1483, a short, but adequate description is provided on intervention fidelity.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
An analytical strategy is presented (page 1483-1484) in which the statistical procedures applied are described and justified. The authors argue for their choices of different tests and models. During the analysis, the authors provide adequate information, including tables and figures in which all the necessary values are included (e.g. levels of significance).
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is thoroughly and transparently presented, with all necessary information provided, allowing the reader to assess and evaluate the research process.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors give a full and balanced report, presenting both positive effects of the intervention as well as potential limitations and areas of caution.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Parental consent is obtained, and the study is approved by the Norwegian Social Science Data Services (see page 1478). The intervention program is designed to build on children's own initiatives and to encourage children's initiatives and skills (e.g. children are told that they can write any way they like and all

initiatives are praised). On page 1491, the authors express regret that the control group could not be treated as a waiting list control group due to the fact that the intervention took place during the last term in preschool and time was restricted. The program was however offered to the control preschool teachers together with a lecture about the program (after positive effects had been documented) so as to give these teachers the opportunity to use the program in their subsequent preschool practice. This reflects a strong sense of research ethics on the part of the authors.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The research design is justified by the authors and seems highly meaningful. The authors reflect well on any potential limitations and problems as to their research choices (e.g. the choice of randomizing at the preschool level) and implement adequate procedures in order to handle these problems in the best way possible (in order to minimize the loss of statistical power, which is however to an extent inevitable).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, the research process is presented with good transparency, allowing the reader to assess the chosen methods and their reliability/validity. In addition to the descriptions provided in the article, an appendix is available in which the invented writing program is further explained. The measures used to test children's early literacy skills are adequately described and appear solid (subtests from standardized testing batteries). Tests were administered by the first author or by trained research assistants. The reliabilities of the measures are calculated using Cronbach's Alpha. In order to ensure intervention fidelity, teacher logs were used to assess the fidelity of each session (see pages 1482-1483). In addition to the logs, the first author visited all preschools to observe and to make sure any clarification needed was given. These observations indicated that the intervention program was followed, although the logs showed an average number of sessions of 36 (as opposed to the intended 40 sessions). An overall content fidelity was calculated as 98 % (percentage of sessions administered in accordance with the plans). The intervention is delivered by the children's regular teachers who received training prior to the intervention as well as a check list detailing the session structure and keywords for scaffolding strategies. The authors argue for the relevance of this strategy as opposed to researchers delivering the intervention. The authors consider trade off effects in page 1491. The only minor

criticism as to the authors' presentations is that it is not entirely explained why the intervention group consists of 40 children, while the control group consists of 65 children.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors control for initial differences between the control and intervention groups. At the start of the intervention, the two groups showed no significant differences with respect to parental education, level, gender, family size, home language or the amount of shared book reading at home (see page 1478). The authors' choice of statistical models are justified and well presented in a separate paragraph detailing the analytical strategy. The authors describe their attempts to correct biases and errors of measurement (e.g. handling floor effects). See pages 1483-1484. Due to randomization at the preschool level, the authors test for differences due to which preschool the children attended. They find that the intra-class correlation coefficients are modest, but that there still is a loss of statistical power due to randomization at the preschool level (see page 1483-1484). To handle the potential biases due to intra-class correlation, the authors apply controls for effects of preschool nesting on the standard errors. The authors calculate effect sizes and relate these to other studies (pages 1488-1489). In the beginning of the analysis, descriptive statistics are presented, and during the analysis, adequate numerical data and tables/figures are presented.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The authors are very careful to present potential limitations and apply all the necessary controls in order to handle measurement errors etc. The authors take the limitations of the study into consideration when drawing conclusions and evaluating the generalizability of the study. The limitations presented (pages 1490-1491) include: - relatively modest effect sizes - modest sample sizes - randomization at the preschool level and the implied loss of statistical power - floor effects
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The authors state on page 1491: "However, due to a small sample size and no control intervention, generalizing conclusions should be made with care". The authors do however argue for the findings having theoretical and applied implications (see page 1491-1492).

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings are very cautiously presented, with openness as to the limitations of the study and the impact these limitations have on the generalizability of the study. The study is theory-driven in that it reflects theoretical discussions and is related to previous research findings. Reviewer 2: No.

ID 27392477: Johansson (2016)

Johansson Eva, and Emilson Anette. 2016. "Conflicts and resistance : Potentials for democracy learning in preschool". *International Journal of Early Years Education* 24(1):19-35.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
May 30, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
On page 22 it stated that "Data for the analyses stem from two research projects,

which investigated the communication of values in ECEC institutions (Emilsson 2008; Johansson 1999). One project studied moral values that are communicated in everyday interactions between toddlers (Johansson 1999). The other study aimed to gain knowledge about fostering values, as expressed in everyday interactions between teachers and children (Emilsson 2008)."

- A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction

- A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description

The overall aim of this study is to investigate resistance in everyday conflicts in early childhood settings and to consider how these conflicts have potentials for democracy learning. The research questions are: (1) What kind of conflicts can be identified in everyday interactions in preschool? (2) How do children and teachers express and maintain resistance in conflict situations in preschool? (3) What potentials for democracy learning are there in such acts? (p. 20)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Observation study

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

The data material consists of video-observations with teacher–child and child–child interactions in both formal (e.g. circle time) and informal (e.g. play) situations.

- Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Age 1-3.
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Age 1-3.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Equal opportunity
 - Other, please specify
The main topic of the present study is potentials for democracy learning in ECEC.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Basic values and/or ethics

- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Learning organization
 - Inclusion/exclusion
 - Social system
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
See p. 19-22.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall aim of this study is to investigate resistance in everyday conflicts in early childhood settings and to consider how these conflicts have potentials for democracy learning. The research questions are: (1) What kind of conflicts can be identified in everyday interactions in preschool? (2) How do children and teachers express and maintain resistance in conflict situations in preschool? (3) What potentials for democracy learning are there in such acts? (p. 20)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
No information on sampling strategy is provided. The participating teachers and children are not described in sufficient detail. It is merely stated that the data stem from two research projects which were carried out in four Swedish preschools, with the participation of 65 children, aged from one to three years, and 15 teachers. (p. 22)
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
Yes and no. There is limited information about data collection, probably because data for the analyses stem from two earlier research projects, which investigated the communication of values in ECEC institutions (Emilsson 2008; Johansson 1999). Therefore, it is merely stated that "the data included 44 hours of video observations with teacher–child and child–child interactions in both formal (e.g.

circle time) and informal (e.g. play) situations. These observations were transcribed into text as 'thick' descriptions; this means seeking to establish the complexity of context, actions and events for the participants involved (Geertz 1973)." (p. 23). Data collection procedures are not described, nor is it stated who collected data for the study.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that the transparency related to data analysis procedures is sufficient, considering that this is a short journal article. The theoretical frames of the analysis are described at page 21-22, and the method and process of analysis is described in detail at page 23-24. However, it is not stated whether both authors were involved in the analysis of the collected data.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Because the collected data stem from two earlier research projects (Emilson 2008; Johansson 1999), the present study lacks detailed information about the sample, sample recruitment, and data collection. However, the theoretical frames and analytical process of the present study is described in sufficient detail.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - Yes, please justify assessment
On page 22 it is stated: "Personal information and videotapes have been separated and safely stored in locked cabinets."
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that the author reports on all variables aimed to study. However, eventual bias cannot be traced by the reader.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 22 it is stated that "Ethical considerations were paramount to ensure that the studies met the ethical requirements. Written informed consent for the children's and teachers' participation was obtained from each preschool's management, teachers and children's parents. Specific concern towards young children as participants was important, as was the fact that conflicts were the foci of observations. From the outset, each participant's rights to respect and protection were considered paramount. Personal information and videotapes have been separated and safely stored in locked cabinets."

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment

The study is a qualitative study exploring acts of resistance in conflicts in order to examine these as potentials for democracy learning. Thus, the aim of the study was explorative and the research methods were explorative. However, one could argue that the analysis of four selected video sequence is not sufficient to answer the research questions posed in the study.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment

Yes and no. Data collection procedures are not described, nor is it stated who collected data for the study. However, it is stated that "data for the analyses stem from two research projects, which investigated the communication of values in ECEC institutions (Emilson 2008; Johansson 1999)" (p. 22). Moreover, it is stated that "the data included 44 hours of video observations with teacher–child and child–child interactions in both formal (e.g. circle time) and informal (e.g. play) situations. These observations were transcribed into text as ‘thick’ descriptions; this means seeking to establish the complexity of context, actions and events for the participants involved (Geertz 1973)." (p. 23). In order to raise the reliability of the data collection the authors could with advantage have elaborated and reflected upon the sampling procedure and the methodological concerns of the data collection and material.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment

The use of the political theory of Mouffe, together with Foucault's theory of power, is well described and accounted for, and the authors also describe the strategy and process of their analysis in sufficient detail. Moreover, the authors explain how the video observations used for the analysis is chosen. Also, the authors use detailed excerpts from the observations which make the analysis and the authors' interpretations of data transparent. This also strengthens the validity and trustworthiness of the data analysis. However, it is not stated whether both authors were involved in the analysis of the collected data. To increase the validity of the data analysis the authors could have elaborated more on the limitations of the data collection or presented alternative explanations for their findings.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
To some extent. It is difficult to rule out bias in studies of this character. However, the authors could with advantage have reflected upon their own bias and pre-understandings, and how these might affect the interpretations of the data material.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
On page 30 the authors state that "It is, however, important to notice that the study is small and further investigations are needed."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: Yes and no. The findings are described and discussed in an explicit way and in line with the theoretical discussion. The sample of centres is very small and neither described or discussed. The authors use only a small part of their observational data and they do not try to explain how they have done their selection. Due to this, the reliability of the study is quite uncertain. The article address an important topic that so far has got very sparsely attention in Nordic literature. Reviewer 2: The authors could have benefited from discussing alternative interpretations and explanations for the findings, but overall the conclusions are convincing.

ID 27392479: Johansson (2016)

Johansson Eva M. 2016. "Det motsägelsefulla bedömningsuppdraget. : En etnografisk studie om bedömning i förskolekontext". , Acta Universitatis Gothoburgensis.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
March 23, 2017
 - A2: Type of publication (only one coding allowed)
 - Thesis/dissertation
Göteborgs universitet
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The overall purpose of the study is to investigate the assessment practices and discourses in Swedish preschool in times of changing principles for state control and steering. Thus, this study's focus is on what sort of assessment practices take

shape in preschools and how these can be understood. (See purpose and research questions at page 33)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
The study was conducted with an ethnographic approach in two preschools located in areas that differ in terms of socio-economic status and ethnic diversity. It could further be described as a critical ethnography (Cf. Thomas, 1993), in that it aims to develop an understanding of the ways that national educational policy and NPM affect assessment practices in preschools as part of their institutional culture, and what consequences that may have for children's identities, agency and future opportunities.

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
The author conducted participant observation involving qualitative shadowing and field notes.
 - One-to-one interview
The author conducted interviews and focus group interviews with preschool teachers in both preschools (see p. 122).
 - Focus group interview

 - Report of diary (field notes)
See p. 121-122.
 - Collection of data from day-care (minutes of meeting, calendar etc.)
Written documentation about the children was collected (see p. 122).
 - Sound recording
Sound recordings and transcriptions of for instance the preschool teachers' conversations about the children (see p. 122).

- A12: Which actors and their conditions are explored? (multiple coding allowed)

- Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - No information provided on the age of the children
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Evaluation and assessment
This study's focus is on what sort of assessment practices take shape in preschools and how these can be understood.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Assessment, evaluation, quality assurance and development
This study's focus is on what sort of assessment practices take shape in preschools and how these can be understood.
 - Working with control documents
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
This study's focus is on what sort of assessment practices take shape in preschools and how these can be understood.
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
This study's focus is on what sort of assessment practices take shape in preschools and how these can be understood.
 - The institution in an economic and political perspective
The study examines the assessment practices and discourses in Swedish preschool in times of changing principles for state control and steering.
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical frame of the study, previous research on assessment practices

in preschool, and the Swedish context in which the study is conducted are described (page 17-110).

- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The purpose of this study is to scrutinize the assessment practices that take shape as preschool teachers perform their work in a state institution. Assessment practices, as they are implemented, are placed in relation to theories about policy and cultural as well as social reproduction. Accordingly, the following research questions are posed: (1) How are documentation and assessment practices formed in relation to (de) and (re)centralized national policy? (2) What concrete assessment practices are formed in the pedagogical work carried out in preschools? (3) What socializing messages are communicated in assessments at two preschools attended by children from different social backgrounds, and how can they be understood in relation to cultural and social reproduction? (See page 33)
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The selection criteria and the two selected preschools are described in great detail at page 116-117 + 131-140. However, the sample of the study (i.e. the participating preschool teachers) is not described in sufficient detail. The author does not provide any further information on the participating preschool teachers or the number of participants.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The data was comprised of participant observation, including qualitative shadowing and field notes, audio recordings of conversations, individual and focus group interviews with participating preschool teachers, and written documentation about the children. The data collection methods are described at page 120-124.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The theoretical frame of the study is very well described at page 87-111. However, the author could have elaborated on the data analysis methods used. The analytical process is not described in detail which makes it a little hard to determine exactly how the collected data was analyzed. The author states that the collected data were interpreted using the analytical concepts to answer the research questions. However, she has also been open to repetitions and patterns in the empirical material, which made it possible for her to formulate new

questions and test new analytical concepts. Questions about what was being assessed and how assessment was carried out generated new questions about why assessment took the form it did and how it could be interpreted in relation to the preschool's culture and its pedagogical orientation (p. 123).

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is reported in a thorough and detailed way. Descriptions concerning the sampling procedure, the selected preschools, and the data collection are given. Insight into the data material is also provided as examples are presented in the result section. However, the study lacks a thorough description of the participating preschool teachers and the analytical process.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports in all research questions posed.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical reflections are presented at p. 127-128. It is stated that that consent was sought and that informants and parents were given written information about the study (see p. 118+127 and appendix 1a, 1b, 2a and 2b). The selected preschools and informants are anonymous. The author also reflected upon her role as a researcher and her own pre-understandings in relation to the data collection and analysis.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The study is a qualitative study exploring what sort of assessment practices take shape in two Swedish preschools and how these can be understood. Thus, the aim of the study was explorative and the research methods were explorative. Therefore, participant observation involving qualitative shadowing and field notes, audio recorded conversations and interviews, and written documentation seem appropriate.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)

- Yes, please justify assessment
Data triangulation was used, and the observations were conducted over a longer period of time (about a year). However, the sample is not described in sufficient detail. Therefore, more information on participants would have strengthened the validity in the data collection process.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Even though the methods of data analysis are not adequately described, detailed transcriptions are used throughout the analysis to illustrate the author's interpretations. This makes the analysis of data transparent and thereby strengthens the validity and trustworthiness of the data analysis process and the findings of the study. Theories and previous research findings are used to reflect upon the findings. The study's trustworthiness is also strengthened by communicative validity and cross-checking of interpretations: "The results of the study were discussed with researchers and graduate students in seminars and conferences where the interpretations have been tried. Throughout this process the empirical data has been analyzed in several sittings and the interpretations have been revised, strengthened or rejected. During the research process, I have also communicated my observations and preliminary interpretations with the informants who have recognised themselves in my description. The study's trustworthiness is thus strengthened by communicative validity and respondent validity." (p. 117). However, the author could with advantage have reflected more upon her own background as a preschool teacher, and thus how her pre-understandings might affect the data analysis.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
To some extent. It is difficult to rule out bias in studies of this character. However, the author reflects upon her own bias and pre-understandings, but not how these might affect the interpretations of the data material.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
On page 126 the author states: "The specific assessment practices as they are formed in the studied preschools cannot be generalized to all preschools in Sweden. Also at the two studied preschools, these practices have taken somewhat different form. However, the result, by thorough descriptions and trustworthy analysis, can be used to understand how preschool teacher' assessments affect

and are affected by state control and power structures. Thereby, the possible consequences for the children can be discussed and prevailing power structures affected."

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)

- No, please justify assessment

Reviewer 1: All in all a very impressive work. The description of the assessment work is solid and convincing. The preschool teachers have an ambivalent attitude towards this part of their work and the author shows how they try to navigate between assessment of individual capacities of the individual child and assessment of the work of the preschool class. This resistance against individual assessment seems to be solved by something she call invisible pedagogic, but this pedagogic is maybe more non-existent than invisible. The result seems to be that the preschool teachers fall back on more or less updated theories and knowledge from development phycology when they make the individual child assessments. While the life inside the two kindergartens are given a very convincing treatment both theoretical, empirical and analytical, the world outside is treated in a more complicated way. I am not convinced that there is any strong political pressure from the central or governmental level to force preschool teachers to do assessment on collision course with the traditional Nordic Kindergarten model. Cited statements from Skolverket give no support to this. Maybe the pressure more is to be found at the municipal level? The treatment of the (re)production of values etc. is also among the more uncertain parts of the treatise.

ID 27434036: Johansson, (2016)

Johansson E, Emilson A, Röhle M, Puroila A M, Broström S, and Einarsdottir J. 2016. "Individual and Collective Rights Expressed in Educator and Child Interactions in Nordic Preschools". *International Journal of Early Childhood* 48:209-224.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 25th of September, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Values education in Nordic preschools - Basis of education for tomorrow; Project Number 53581
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
However, the data is collected not only from Scandinavia but from Finland and Iceland as well.
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Ministry/government/local government, please state the name of the funder
The project was funded by NordForsk.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark
 - Norway
 - Sweden
 - Other OECD countries, please specify
Finland and Iceland.
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years

- Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Age 1-6
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Age 1-6
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Pedagogical practices
 - Other, please specify
Rights and gender patterns
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication

- Social system
- B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors relate the study to other studies within the field. The theoretical framework is as well presented. Information on research funding is given.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim is contextualized and clear. Research questions are presented. The aim is to explore how rights are argued for and communicated between educators and children and how gender is related to rights in preschool.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
The sample size is presented. However, the criteria for sampling is not discussed. The selection of the sample is not accounted for.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
The data is drawn from a larger research project. The method used in the larger project is clarified. However, it is not adequately described when it comes to how the video observations were carried out in practice and if they were carried out in the same way in each country. Furthermore the authors do not discuss the potential influence of their presence on the children and the educators. Further process with the data used in this study is described.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The criteria for selecting data is clarified and justified. And the process of the selection is presented. The analytical attention is presented as well. There is a clear strategy for the analysis. The data was analyzed by three researchers (leading this study) and afterwards scrutinized by the Nordic research team which strengthens the interpretations of the findings.
 - C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The aim and the context are clear and the theoretical foundations are clarified. The chosen data for the analysis are justified and it is described how it

was selected. The analytical procedures are adequately described. However, the information given on research methods and sampling procedures is not adequate, and the reader is not given an opportunity to assess the empirical foundations for the analysis, nor its' trustworthiness.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
It is stated that analyses in this study are drawn from the research material of the larger project on values in Nordic preschool. However, there is no direct reference to the project nor the full, original data presented.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The authors answer the research questions presented. The process to answering the research question is clarified and justified. However, the methodological procedures are not adequately described and the researchers do not reflect on their role during the data collection.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that ethical considerations addressing country-specific rules were vital to safeguard the ethical requirements during the process.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design per se seems appropriate in relation to the aim of this study. The authors do not address the reasons for choosing these particular methods, nor do they provide clear information on sampling and video observational procedures (how were they carried out?)
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
As stated previously, the authors do not provide adequate information on sampling and methodological procedures. Were the video observations carried out in the same way in each country? Did each researcher have responsibility for data collection in their own country? Did the researchers agree on the criteria for video observations? Furthermore, the researchers do not address the potential influence of their presence on the children and the educators.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)

- Yes, please justify assessment
National research team and the Nordic research team were a part of the analysis process which is strengthening the interpretations and the categorisations of the data. Reflections on the interpretations of the data is provided. The researchers have stated that they in the analysis searched for variations and similarities. However, it is unclear in the analysis if the variations and similarities are caused by differences in the country. It is unclear what data comes from which country. The individual and collective rights identified, are they representative for all five countries?
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The context in this study is sufficiently described why the explanations and descriptions for the findings of this study are reasonable. Furthermore the researchers present some reflections on other possible explanations for the findings and other factors possibly contributing to findings such as those presented in the study. However, the information given on methodological procedures and sampling is not adequate which potentially could have led to other findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
No such statement or reflections presented.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. Sufficient data/descriptions are presented to support the findings in the analysis. Furthermore the authors reflect on possible factors influencing the findings. Reviewer 2: No. All over I find that the conclusions are reasonable and the findings trustworthy. However, there are some methodological weakness, not least concerning the sample of kindergartens.

ID 27392482: Kaarme (2016)

Kaarme Johan, Hickman Rachel A, Nevéus Tryggve, Blomberg Jonas, and Öhrmalm Christina. 2016. "Reassuringly low carriage of enteropathogens among healthy Swedish children in day care centres". *Public Health* 140:221-227.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on September 19th, 2017.
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
Carriage of enteropathogens among healthy children attending daycare centres
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
The Gillbergska Foundation
- University/research institutions, please state the name of the funder
The Medical Faculty, Uppsala University
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Cross-sectional
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Other (please specify)
Collection of diapers
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children between 0-1 years
 - Children 1 year
 - Children 2 years
 - Children 3 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Diapers from children between 11 and 45 months old.
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Other, please specify
Faecal samples from diapers
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Health
- B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
On pages 221-222, the authors provide information on the background for the study, including results from previous studies. The study is described as responding to a need for studies on asymptomatic carriage of pathogens using modern molecular methods. Thus, the relevance of the study is justified by the authors. Information is also provided on the percentage of Swedish children (and children in Uppsala specifically) attending daycare as well as on average group sizes.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The goal of the study, as well as its' relevance, is argued for. The aim of the study is described on page 222: "The objectives of this study were to use molecular techniques to estimate the prevalence of asymptomatic carriage of multiple enteropathogens during late spring and autumn among healthy children in a high-risk environment and investigate to what extent this population constitutes a reservoir for gastrointestinal disease".
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is shortly, but adequately described, including n-sizes and some information on recruitment. It is stated on page 222 that "Faecal samples from individual diapers were collected in June (n=125) and from September to October 2010 (n=313)". 46 preschools participated, with participating children being between the ages of 11 and 45 months old. One diaper per child, marked with the child's age, was collected. It is not entirely clear why the authors chose to collect samples both in Spring and in Autumn (two data collection points). Why was this

done? It seems that the diapers collected were all for individual children (a total of 438 individual diapers), as opposed to collecting diapers for the same group of children at two points and then comparing the results at different points (Spring and Autumn). The authors could have done more to clarify why they did not just collect all the diapers at one point (practical reasons?).

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
This is very difficult to assess due to lack of knowledge surrounding the research field and traditions. However, descriptions are provided of the methods used to detect pathogens on pages 222 and 223 (molecular techniques).
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Again, this is difficult to assess, but the analysis of fecal samples is described, including confirming methods and re-analysis of samples. Tables are provided.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
This is difficult to assess due to lack of content knowledge surrounding medical/molecular research. However, it seems that all the necessary information is provided, although with some uncertainty pertaining to the use of two data collection points, as noted in C3.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report fully on the research objectives and adequately discuss their findings.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Research ethics are addressed on pages 222 and 225. It is stated that the Regional Ethics Committee made an assessment saying that no ethical consent was needed since the samples were classified as biological waste and none of the participants could be identified. Information about the study was sent to preschool directors for further distribution to staff and parents.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)

- Yes, please justify assessment
This is impossible to address due to a lack of knowledge on medical/molecular research methods. But as far as this reviewer can judge, the research design is coherent and the choices made are justified by the authors.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
This is again very difficult to assess, but the authors report transparently on the methods used and consider the procedural limitations of the tests (page 222).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Difficult to assess, but the authors provide results both textually and in a table format, and confirming methods/re-analysis is used whenever possible in order to ensure the reliability of the results. The results are discussed and related to findings from other studies.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
This is not possible to assess. The authors seem to be well aware of potential limitations to the methods used, and they openly discuss these issues on page 225 (challenges pertaining to the use of sensitive molecular methods). Also, the authors reflect on the fact that samples were collected outside of the peak season for many pathogens (see page 225) as well as on the fact that no information on other relevant matters such as health status or recent infections was gained from the families due to the samples being unidentified.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
However, the authors make references to other studies, thus seeking to establish some form of generalizability.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: It is not possible for this reviewer to assess the trustworthiness of the conclusions drawn. However, the study seems coherent, with aims, methods and conclusions aligned with one another. The authors claim that their results show a

strikingly low carriage of enteropathogens, but they are also careful when stating that further research into this topic is warranted. Reviewer 2: No.

ID 27434821: Koch, (2016)

Koch Anette Boye. 2016. "Pædagogens rolle og betydning for trivsel i børnehaven". *Nordic Studies in Education* 36:193–210.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
13/7-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Danish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Focus group interview
The children were interviewed in pairs (two children at the time).
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
Children in kindergarten
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)

- Perspective of the child
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The background of the study is well presented. This involves presenting the research in the area.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study is clearly outlined p. 194. The author also writes how the research can be used practically i.e. it provides inspiration for preschool teachers who discuss how their role can influence the well-being (trivsel) of children. "Med reference til empiri fra etnografiske interviews med 11 6-årige børn om deres oplevelser med professionelle voksne i 3 børnehaver interesserer undersøgelsen sig for, hvad en gruppe danske børn fortæller, når de bliver spurgt om deres oplevelser og syn på konkrete voksne i deres børnehave, kort tid efter de har forladt institutionen."
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample was described in p. 196. The author has outlined how the participants were selected by two leisure time workers (skolefritidsordningspædagoger) and what the inclusion criteria for the children were; they had to be different in terms of their personality, e.g. careful (forsigtig), outgoing (spilopmager).
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The author has clearly outlined how the data was collected p. 196-197. The author has also argued why the particular approach of using photographs in the study was used by making reference to previous research in this area. It was clear what the focus of the interview was. Moreover, it was clear from the methods

section that the author was taking measures to make sure that the children were feeling comfortable in the interview sessions.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There is a very elaborate and systematic presentation of the three practical steps involved in the data analysis p. 199-200. The author outlines both the theoretical background of the analysis but most importantly it is very clear how the analysis was conducted. It is somewhat unclear who is analysing the data but this is a minor issue given the otherwise extensive presentation of the analytical process.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The study is clearly and concisely presented. Reviewer 1 can find no information which is missing (apart from who analysed the data). Overall, the study is very transparent.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common in this type of qualitative research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
This is a tricky question. The author did not address the issue of selective reporting bias. It seemed that only one researcher was analysing the data, thus, there could have been selective reporting bias. The author has, however, reported on all the aspects that she intended to investigate.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author seems to have taken ethical considerations very seriously in the study. She has followed procedures of informed consent and she has informed the participants of their right to withdraw. One child withdrew from the study. The author seems to have taken adequate measures to make the children feel comfortable in the interview session i.e. by interviewing them in pairs. In addition the researcher has asked children about the pre-school teachers after they stopped in the preschool in order to avoid conflict in relation to these pre-school teachers.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It was relevant to interview children about their perspectives on the preschool teachers (pædagog) in order to get an insight into the research question. The

author has presented several arguments for choosing the specific research design and it seems very convincing e.g. she has also argued why she used the specific data collection method of showing photos to children, which prompted them to open up. The researcher has also taken measures to interview children with different personalities in order to get a broad view of different children's perspectives. In addition the researcher has asked children about the pre-school teachers after they finished preschool in order to avoid conflict in relation to these pre-school teachers. Overall, the author leaves an impression of having thoroughly thought out the research design before commencing the study.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The procedure of data collection was described in detail thus it was possible to replicate this process. The author ensured that children with different personalities were intentionally recruited for the study. This gives strength to the generalizability of the results because the data reflect different children's perspectives. The author has also argued why she used the specific method of showing photos to children, which prompted them to open up. In addition, the author interviewed the children about their preschool teachers AFTER they finished preschool in order to avoid putting the child in a difficult situation. Issues of dissatisfaction or conflict with current staff in the preschool were avoided and children could talk freely without feeling scared of doing so. Thus, the data appeared trustworthy and valid.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The data analysis was conducted very systematically and the results were also presented in a systematic manner. The analytical process was transparent, and it would be possible to replicate this process. The data was analysed from different angles in three different phases. The author thus did not merely view the data from one perspective but also broke up the initial findings (phase 1) in the second phase by introducing theoretical perspectives. In the third phase the data is analysed in relation to the well-being of the child. Thus, the author worked her way around the data in a very thorough and systematic manner. The data analysis same across as trustworthy and valid.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)

- A lot, please justify assessment
The author has taken measures to avoid possible biases, e.g. she has interviewed children with different personalities and she has interviewed the children about their preschool teachers AFTER finishing preschool. This was done in order to get different children's perspectives and in order to avoid children not being able to talk freely about their preschool teachers. She also interviewed children in pairs in order to make them feel at ease. In this manner she promoted their "opening up" to the research question. On a critical note: The sample size of 11 children was not particularly large. However, it is satisfactory in light of it being qualitative research.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
The author has not directly mentioned the generalizability of the study. Reviewer 1 is unsure if the author believes that her results are generalizable to all children's perspectives. The author claims to investigate different "children's perspectives" p. 196.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The author is generally quite cautious in her conclusions. She links her findings to previous research in a convincing manner. Reviewer 2: This is a study with many good qualities and high consistency. If the reviewer had carried out the study in the same way as the author it could very well have ended up in the same results and conclusions.

ID 27392493: Lago (2016)

Lago Lina. 2016. "Different transitions : Timetable failures in the transition to school". *Children & society*.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
19/7-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography

 - Observation study

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
participant observation
 - One-to-one interview
The author writes that interviews were carried out but she does not specify if they were one-to-one or group interviews

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 6 years

 - Other, please specify
The first grade children in the study were typically 6 or 7 years old, but some children were 8 years old because they retook first grade.

- A13: In studies with children, which age groups are covered?
 - Age 3-6

 - Other, please specify
The first grade children in the study were typically 6 or 7 years old, but some children were 8 years old because they retook first grade.

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 6 years

- Other, please specify
The first grade children in the study were typically 6 or 7 years old, but some children were 8 years old because they retook first grade.
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
 - Other, please specify
The first grade children in the study were typically 6 or 7 years old, but some children were 8 years old because they retook first grade.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Transition from day-care to school
 - Perspective of the child
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Transitional processes
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The author has outlined the theoretical framework and the research context of the study. This leads to the author outlining how this article contributes to the current research.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The author has outlined the aim of the study in the abstract and different places in the article. The aim is understandable and entails "discussing different ways of making the transition from the preschool class to first grade", p. 1. It involves describing the meaning of temporality. This also involves analysing the results in relation to "transitions that do not follow the expected patterns", p.3.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)

- No, please justify assessment
The author has specified that she followed a group of 25 children and their teachers in a school in Sweden. But not many details were given on e.g. the gender of the children and staff. It transpires in the results that the children's age range was 6 to 8. The author has not outlined why the particular school in the study was chosen and how it was recruited. Moreover, it is unclear if the school was urban, suburban or located in the countryside.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
The author has outlined that she has used field notes and interviews. It is, however, unclear if the interviews were one- to-one or group interviews (from the excerpt in p. 6 it seemed to be one-to-one). In addition it is unclear if it was both children and teachers who were interviewed. The author describes that she has conducted participant observation but it is unclear how the field notes were recorded e.g. during or after the observation, and did she have a particular system of recording the field notes? The extent of the data material is unclear: how many hours of observations/interviews, number of observations/interviews (were all 25 children interviewed? Were any teachers interviewed?). It was not specified if the interviews were transcribed.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Reviewer 1: No Reviewer 2: Yes, partly The author has written that she uses ethnographic analysis p. 4. But she has not specified exactly what this involves i.e. the systematic process of analysis. The author found four themes. Under each theme the author has backed up the existence of the themes by providing examples from field notes and interviews. These examples also provided the ground for explaining in more detail what the themes involve. There is very little reference to interviews in the results (only one quote). Reviewer 1 wonders why this is the case. Was the field note data set larger than the interview data set? Or was there a reporting bias (see also C8)? The author has not specified if it was just the author who arrived at the four themes or if this was a process with peers. Reviewer 1 would have liked more information on the process of arriving at the four themes presented.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - No, please justify assessment
The study has some shortcomings in terms of transparency. Particularly in relation to data collection. The author has provided very sparse information on the data collection. In addition Reviewer 1 would have liked more information on the process of arriving at the four themes presented in the study.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common in this type of qualitative research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
*Reviewer 1: No. The author has not actively taken measures to avoid selective reporting bias. As outlined in C5 the author has not specified how the author arrived at the four themes, but it seemed that it was just the author herself who arrived at the five themes which could indicate a selective reporting bias. On a positive note the author has used excerpts from the fieldnotes and interviews to back up the themes. On a negative note the author mainly has used field notes to back up the themes. There is merely one quote from an interview in the results.
Reviewer 2: Yes, partly. There is however no mention of the occurrence or exemplarity of the analysed examples.*
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author appears to have taken the ethical practice of the participants seriously. She has given a letter of consent to the parents/guardians of the children. Moreover, she has obtained verbal consent from teachers and children. She has also given pseudonyms for people and places to protect the identity of the participants. She does not specify the particular ethical guidelines she has consulted, but in the article she demonstrates that she has followed ethical procedures.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
In relation to the research question it is relevant to make observations of the children and also to interview the teachers and children about the transition. It is however very unclear how the author observed and interviewed the children e.g. was it one- to-one interviews with the participants, and were teachers also interviewed? The research design was not very well explained in the study. However, the overall research design appeared to be relevant. It was relevant to include both field notes and interviews to illuminate the topic from different angles. The author did not however use many excerpts from interviews (only one of the six examples is taken from an interview).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)

- No, please justify assessment
It would be very difficult to replicate the data collection because there is a lot of missing information on this (C4). The face validity of interviewing children and teachers is good in terms of getting an insight into their perspectives on the transition from preschool class to school. However, it is unclear if the teachers were interviewed and how many children were interviewed. This has implications for the generalizability of the study.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Partly. It is not entirely clear how the author arrived at the four themes, however, the author has presented the four themes and backed them up with examples. Thus, it is not possible to replicate the data analysis entirely. But the validity of the results seemed trustworthy.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
As outlined in C10 the research design is well suited for the research question, however, the author has not described the research design in much detail. The author has not taken a lot of measures to avoid bias or errors. She has collected data from both interviews and field notes. However, she appears to have mainly relied on the field notes in the results. Only one excerpt from the interview was presented.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The author has drawn conclusions which seem plausible. The author has presented four themes and has backed up these themes with excerpts from field notes and interviews. The conclusions seem to be drawn mainly from the field notes and thus there might be a bias in the reporting.

ID 27412484: Langer (2016)

Langer Sarka, Fredricsson Malin, Weschler Charles J, Bekö Gabriel, Strandberg Bo, Remberger Mikael, Toftum Jørn, and Clausen Geo. 2016. "Organophosphate esters in dust samples collected from Danish homes and daycare centers". *Chemosphere* 154:559-566.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on September 15th, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The data used here stem from the Danish study "Indoor Environment and Children's Health (IECH)". In connection with this, at least three other publications that are mentioned in the current study should be listed here: Clausen et al. (2012). Children's health and its association with indoor environments in Danish homes and daycare centres - methods. Indoor Air 22, 467-475. Langer et al. (2010). Phthalate and PAH concentrations in dust collected from Danish homes and daycare centers. Atmos. Environ. 44, 2294-2301. Weschler et al. (2011). Squalene and cholesterol in dust from Danish homes and daycare centers. Environ. Sci. Technol. 45, 3872-3879.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)

- English
- A6: What is the purpose of the study? (only one coding allowed)
 - Description
Mass fractions of organophosphate esters in dust in homes and daycare centres
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Private funding, please state the name of the funder
The Villum Foundation, contract number VKR020814
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Cross-sectional
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Other (please specify)
Dust samples
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
Ages 3-5
- A14: Who informs the study? (multiple coding allowed)
 - Other, please specify
Dust
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Health
- B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Physical environment
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Overall, this is a very difficult study to assess due to its' technical nature and position within a research field entirely different from social science and pedagogics. Thus, this reviewer does not possess the necessary scientific background demanded to assess such a piece of research. Therefore, the assessment given here is based on an overall impression of the study as opposed to a more in-depth investigation of various study features. In general, it seems to this reviewer that the context of the study is adequately clarified, in that information is given on other studies, and the contribution of the study is discussed in relation to existing knowledge.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aims of the study are provided on page 560, where the authors make the following statement: "The aim of the present paper is threefold: to report the mass fractions of selected organophosphate esters (OPEs) measured in the dust samples collected from children's bedrooms (n=500) and daycare centers (n=151) as part of the IECH investigation; to examine potential correlations between levels of the individual organophosphates, both in the children's bedrooms and daycare facilities; and to compare the results with those reported in other studies to derive a sense of variations over geographical location and time. The information presented in this paper can be used to improve understanding of Danish children's exposure to organophosphate esters".
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is shortly, but adequately described on page 560 as consisting of 500

children between the ages of three and five and all the daycare facilities attended by these children (N=151).

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The procedures for dust collection are adequately presented on page 560.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
This is very difficult to assess due to the technical nature of the paper and this reviewer's lack of scientific background within the field of chemistry. However, the calculation and analyses made seem thoroughly described and relevant tables and e.g. p-values are provided.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The study seems to be reported with adequate transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Authors seemingly give a full report on the research questions.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The data used here are part of a larger study where research ethics have presumably been handled (consent from the participating families and daycare centers). Since the samples collected are dust (as opposed to human samples), this reviewer has no specific concerns.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
This is not possible to assess due to a lack of knowledge on what constitutes good chemical research. But the design seems reasonable, and the authors relate the study to other research, where similar procedures have been used.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)

- Yes, please justify assessment
It seems that relevant procedures are applied. The descriptions given are adequate in terms of transparency.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
It seems that all necessary data are provided (numbers and tables). The authors use complex statistical modelling, where e.g. p-values are given. The findings are discussed in relation to other research. The authors characterize this as a large study compared to other research (p. 563).
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
Not possible to assess. The authors openly state areas of caution, see page 563.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to the population
Somewhat difficult to assess.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: Not possible to assess, but overall, the methods and analyses seem reasonable, and the study follows a strict scientific order. The statistical analyses appear solid, and data are adequately presented. The authors are aware of areas where caution is needed. Reviewer 2: No.

ID 27988663: Larsson (2016)

Larsson Jonna. 2016. "Emergent science in preschool: The case of floating and sinking".
International Research in Early Childhood Education 7(3):16-32.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
6th of october 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
"The aim of this article is to explore how children understand the concepts of "floating" and "sinking" in a Swedish preschool activity. The specific sequence is scrutinized by exploring children's expressions of their understandings of the phenomena. Of importance for this study are the opportunities provided for

children to develop their current knowledge and whether their utterances are addressed and taken into consideration. Therefore, the research question is: In what ways do children express and enhance their understanding of floating and sinking in an explorative and elaborative context?"

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
p. 29: The data production was supported by the Swedish Research Council/Educational science under Grant 729-2010-200 and the overall research-process was financed by University of Gothenburg, Sweden.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
This research is framed as a case study
- A10: What is the design of the study? (multiple coding allowed)
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Report of diary (field notes)
In this case study, video recordings formed the basis for transcripts of communication and actions. Together with minor additional field notes and researcher reflections, video data and transcriptions were the basis for the analysis.
 - Video
"In this case study, video recordings formed the basis for transcripts of communication and actions. Together with minor additional field notes and researcher reflections, video data and transcriptions were the basis for the analysis."
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
The teacher had an educational bachelor degree focusing on children aged 1 to 6 years, and 18 years of teaching experience, but no specific education in science.
 - Children 4 years
Data is drawn from a 45-minute session where a floating and sinking activity was conducted by one teacher, and four children: Samira (6.4 years), Tibelia (6.0

years), Akram (5.7 years), and Hakim (4.4 years). The activity took place inside during the morning while the other children were playing outside. The teacher had an educational bachelor degree focusing on children aged 1 to 6 years, and 18 years of teaching experience, but no specific education in science.

- Children 5 years
Data is drawn from a 45-minute session where a floating and sinking activity was conducted by one teacher, and four children: Samira (6.4 years), Tibelia (6.0 years), Akram (5.7 years), and Hakim (4.4 years). The activity took place inside during the morning while the other children were playing outside. The teacher had an educational bachelor degree focusing on children aged 1 to 6 years, and 18 years of teaching experience, but no specific education in science.
- Children 6 years
Data is drawn from a 45-minute session where a floating and sinking activity was conducted by one teacher, and four children: Samira (6.4 years), Tibelia (6.0 years), Akram (5.7 years), and Hakim (4.4 years). The activity took place inside during the morning while the other children were playing outside. The teacher had an educational bachelor degree focusing on children aged 1 to 6 years, and 18 years of teaching experience, but no specific education in science.
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
The aim of this article is to explore how children understand the concepts of “floating” and “sinking” in a Swedish preschool activity.
 - B2: Main educational feature(s)? (multiple coding allowed)

- Content
science in preschool
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Social system
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
It's both 'yes' and 'no' because of the following reasons: The study explains why it is done at this point in time, in those contexts and with those institutions on page 21, stating: "When locating preschool settings with an explicit focus on physical phenomena, purposive sampling (Cohen et al., 2007) was found to be a suitable tool for data collection. Settings with such a focus are of interest since the connections to physics (i.e., physics in a wider understanding, not as a school subject) were, at the time of data production, newly integrated into the national curriculum for preschool (National Agency for Education, 2016) and found to be rarely occurring in preschools in Sweden (Persson, 2008). Science is highlighted in terms of supporting children in discerning, exploring, elaborating, discussing, and documenting phenomena and events in nature. Teachers were expected to develop children's understandings about simple chemical processes and physical phenomena. Three preschools in the west of Sweden were found to have such focus and two of these agreed to participate in the research project. The particular preschool setting discussed in this article was situated in a multicultural area and functioned according to the national curriculum (National Agency for Education, 2016). The participating preschool had prior experience of focusing on science in terms of the solar system and prehistorical as well as contemporary animals. At the time of this research, they had an ongoing theme about boats, and during these activities, a focus on floating and sinking was highlighted." The study highlights some of the relevant research on the area which are used as examples to build on. The study however doesn't highlight which groups were consulted in working out the aims to be addressed in this study nor do the author reports how the study was funded.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
"The aim of this article is to explore how children understand the concepts of "floating" and "sinking" in a Swedish preschool activity."
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
"The particular preschool setting discussed in this article was situated in a multicultural area and functioned according to the national curriculum (National Agency for Education, 2016). The participating preschool had prior experience of focusing on science[...]The teachers and their group of children agreed to have a researcher follow their work. The 18 children (of which 14 were part of the study) and the three teachers (two participating) were shadowed (Czarniawska, 2007) by the researcher carrying a video camera during ongoing activities. Data is drawn from a 45-minute session where a floating and sinking activity was conducted by one teacher, and four children: Samira (6.4 years), Tibelia (6.0 years), Akram (5.7 years), and Hakim (4.4 years). The activity took place inside during the morning while the other children were playing outside. The teacher had an educational bachelor degree focusing on children aged 1 to 6 years, and 18 years of teaching experience, but no specific education in science." However, even though this description is given there is a lack of information about WHY/HOW these children have been chosen?
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
"In this study case study, video recordings formed the basis for transcripts of communication and actions. Together with minor additional field notes and researcher reflections, video data and transcriptions were the basis for the analysis." However it is an insufficiency that the author doesn't mention exactly how many days, minutes or hours she were 'shadowing' her sample in total at the two preschools that the sample consist of.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
"Starting with verbatim transcripts from one video-recorded session, children's utterances about boats, floating, and sinking were highlighted and constituted the unit of analysis. By using a qualitative content analysis (Graneheim & Lundman, 2004) the wholeness of the activity and the communication is scrutinized in order to illuminate themes, subthemes, and latent and manifest content. That is, children's utterances are refined to a manifest content, which comprises descriptions close to the communication (see Table 1), for example, when a child answers that a stick floats since "there's holes in it" (line 1802). This was labeled

as “weight”³ (latent content) under subtheme and organized as theme (i) to float and/or to sink. In sum, the content analysis revealed three themes and six subthemes (see Table 1). Such analysis is used to reveal themes in children’s everyday language and to complement the cultural historical perspective. The themes that emerged from the analysis showed areas that were essential to the activity. “ (p. 21-22)

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Both yes and no. The aim is clear, the theoretical basis is described and so is the methods, however there is an unclarity regarding data conducted. The readers don't know exactly how many times the researcher was at the two different preschools in order to shadowing (collect her data). The 45 minutes session that is taken out to be analysed leaves the readers with doubts about in total how many minutes or maybe hours of total shadowing that are conducted at the two different preschools. The transpaerncy is lacking with regard to the total number of video-taped sessions at the two pre-schools.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
This is difficult to assess as the transparency regarding data collection is lacking. The author describes the two preschools as if they were the same preschool. Detailed preschools descriptions are lacking as how many hours of shadowing the author ended up with are not explicated.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
“The trustworthiness of qualitative research is often described in terms of concepts such as credibility, transferability, and dependability (Bryman, 2011;

Graneheim & Lundman, 2004; Lincoln & Guba, 1985, 1989). Regarding credibility, the emphasis was on the choice of methods for the production of data that allowed making in-depth observations and selecting a unit of analysis from the material (Graneheim & Lundman, 2004). Researcher biases are avoided by, for instance, using a video camera, which contributes to “low-intrusion data” (Edwards, 2007, p. 129), that is, not to disturb participants in ongoing activities.”

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analysis is illustrated with photos (empirical data) throughout the analysis which establishes reliability and validity of data analysis.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The author is carefully discussing and reflecting the observations
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
the author states on page 22: "Acknowledging that this study rests on a small sample size, transferability is not possible beyond the context. However, it may be possible to find similar situations by providing the reader with contextual aspects and empirical examples with respondent's voices (Bryman, 2011; Lincoln & Guba, 1985, 1989)."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
It's difficult to answer. The study is well set up, however missing information on actual data collection leaves the reviewer with a doubt about exactly why this 45-minutes session was taken out to be analysed. The findings, however, are well documented by transcripts and quotes. The themes are mainly the basis for the descisions about which observations are presented(?) see table 1

ID 27392441: Lindstrand (2016)

Lindstrand , Anna Eriksson, Hansson Lina, Olsson Rebecka, and Ljung-Djärf Agneta. 2016. "Playful learning about light and shadow : a learning study project in early childhood education". *Creative Education* 7(2):333-348.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 2nd of October, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - "What works"
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is a mixed methods research
- A10: What is the design of the study? (multiple coding allowed)
 - Action research
In the study the design is called for a learning study project.
 - Experiment with non-random allocation to groups (quasi-experiment)
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Video
 - Practical test
It is stated that the test was designed as a structured individual interview.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
Age 4-5
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 4 years
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Age 4-5
- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Evaluation and assessment
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Assessment, evaluation, quality assurance and development
 - Working method/educational method
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors draw the study to other studies within the field and illustrate the relevance of it by referring to the revised curriculum. The theoretical framework is as well presented. There is no information given on research funding.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study as well as the relevance of it is presented. The aim is to explore a learning study (LS) based on variation theory could support the development of playful physics learning in early childhood education (ECE). Clear research questions are provided.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Yes and no. When it comes to the size of the sample, the reader is provided with adequate information. However, there is no information given on how the sample was identified nor recruited. Furthermore, it is not clear why it was student teachers participating in the study and besides, what is their relation to the participating municipal ECE settings?
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment
The authors give an insight in LS in general. The theoretical framework is clear and how it is shaping the LS. The specific methods used and the methodological procedures are adequately described. However, the study is missing some arguments in relation to the quantitative part of the constructed test. The authors do not discuss if the awarding-system is the best way to measure the children's learning process. Furthermore, is it possible to quantify the children's learning about physics?
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The analytical process is clear. However, it is stated on page 339: "(...) in case of doubt, the video documentation was consulted." Though it seems as a strength for the validity that there are some double checks on the data, however, it is unclear when the doubts could arise in relation to the analysis and what kinds of doubts.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The context and the theoretical foundations are clarified and the aim is clear. The information given on methodological and analytical procedures is transparently reported.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors answer the research questions presented. The process to answering the research questions is clarified and justified. Validity check was performed during the analytical process consisting of e.g. blind reviews.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that the study complies with the ethical standards of the APA (2010). Informed consent was obtained.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design per se seems appropriate in relation to the aim of the study. The research design is clarified and justified.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, the methodological procedures are described adequately and transparently reported. However, there is no information given on the relation between the teachers and the children participating in the study. Did the teachers have any associations with the children?
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The process of the analysis is clear and the blind review and the regulations of the analysis according to a common understanding are strengthening the interpretations of the analysis, so the findings seem more trustworthy. However, it is not clarified why the teachers were analyzing the test interviews and furthermore, no discussion is provided on the relation between the teachers and the data collection and the analysis. Nor is it discussed why the researchers were not participating in the data collection. It is stated on page 339, that the analyses were based on "the assessment form", however, there is no information given on it. What was the content of it? What were the criteria for the analysis? Furthermore, when looking at table 7 on page 345, it is illustrated e.g. in cycle C that some of the children (amount unknown) scored 0 points in the pre-test and as well in the post-test (which also occurred during cycle A). It is questionable why the researchers do not use or analyze that data - it could possibly mean that the interventions did not help some children with learnings about physics. If the focus was on that data instead of the data excerpts where there were obvious progress, would that have led to other understandings of the learning study?
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The research design and the chosen methods seem meaningful compared to the aim of the study. The context in this study is sufficiently described why the findings are reasonable. As stated previously, focusing on other data excerpts could potentially have led to other findings - not quantitatively, but the understandings of the interventions.
- C14: Does the author address the generalizability of the study? (only one coding allowed)

- No, the author does not address the generalizability of the study
No such statement.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. Sufficient data are presented to support the findings which make them reasonable. The focus and the aim are clear. Reviewer 2: No. I find that the article handle the topic in a satisfactory way. However, I miss some information about the sample. Why were just these kindergartens and these children selected. I would also have liked some information about the relationship between the researcher and the students (called teachers in the article). Was this a part of their exam and had the researcher any role in the evaluation of their work?

ID 27246080: Löfgren (2016)

Löfgren Håkan. 2016. "A Noisy Silence about Care: Swedish Preschool Teachers' Talk about Documentation". *Early Years: An International Journal of Research and Development* 36(1):4-16.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
12/7-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The data collected in this study were collected in collaboration with the project "Visibility documentation and changes in the teacher profession in preschool". The data was used in two other articles: Löfgren, H (2015a). Learning in Preschool: Teachers' talk about their work with documentation in Swedish preschools. Journal of Early Childhood Research, 1-14 Löfgren, H. (2015b). Teachers' work with documentation in preschool-Shaping a profession in the performing of professional identities.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
In the current article the author has not informed how the study was funded. But in Löfgren (2015a) it was stated that the study was funded by the Swedish Research Council. Löfgren, H (2015a). Learning in Preschool: Teachers' talk about their work with documentation in Swedish preschools. Journal of Early Childhood Research, 1-14.

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - View study

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview

 - Focus group interview

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

- A13: In studies with children, which age groups are covered?
 - Not applicable

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

- A15: In cases where children inform the study, which age groups are included?
 - Not applicable

- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Evaluation and assessment

preschool teachers documentation. "The questions departed from a broad definition of the concept of documentation, including everything that the teachers themselves defined as work with documentation. Briefly, the forms of documentation included in the data are as follows: quality reports, activity plans and documents of commitment are mainly a task for the preschool managers and are usually made public in official homepages and reports. Wall-documentation is when teachers collect pictures or take photographs and exhibit them for parents and children, often accompanied by a quote from a goal taken from the national curriculum. Pedagogical documentation is a certain form for documenting children's activities with roots in the Reggio Emilia philosophy. The method is common in the data and is taught in certain courses and described in the literature (Åberg and Lenz Taguchi 2005). Triple logs are a method based on a template that serves to facilitate teachers' systematic common reflections on activities in preschool. Individual performance reviews and portfolios are focused on individual children's development and learning. Often examples of children's work are collected in a binder." p. 9.
 - Curriculum
 - Policy
- B2: Main educational feature(s)? (multiple coding allowed)
 - Basic values and/or ethics

values in relation to care vs. learning.
 - Working with control documents
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable

"This article investigates what happens to institutional narratives of care in Swedish preschool when a policy on increased documentation is introduced. Questions deal with preschool teachers' professionalism as expressed through the teachers' talk about documentation." p. 4
- B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in an economic and political perspective

- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The author does not directly argue why this particular research is needed and how it contributes to the research area. However, the author has outlined an adequate introduction which deals with relevant issues related to the current study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
In p. 5, Löfgren has outlined some of the questions that the article deals with. These questions are not entirely clear e.g. "how do teachers "do" professionalism in their stories?", (p. 5). "This article investigates what happens to institutional narratives of care in Swedish preschool when a policy on increased documentation is introduced. Questions deal with preschool teachers' professionalism as expressed through the teachers' talk about documentation", p. 4. The question: "How can the process of silencing institutional narratives of care be described?" is based on Linde (2009).
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Overall, there is a good description of the sample e.g. the different preschools where the teachers were working were described. The sample was recruited in a mid-sized town in Sweden. Reviewer 1 is however confused about how many preschool teachers took part and how many interviews were conducted. The author writes that 12 interviews were conducted with 17 preschool teachers. The author then proceeds to write that four interviews with two teachers were carried out (8 teachers) and that the other interviews were conducted individually. This calculation does not add up: it is uncertain if 8 (four plus eight interviews) OR 9 (eight plus nine teachers) preschool teachers were interviewed individually.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Overall, there was a good description of the method. The author has specified the focus of the interviews i.e. what did the interviewer focus on when interviewing the participants. The author has not provided the exact questions but this is ok since semi-structured interviews are common and since the general focus of the interviews was made clear. But as outlined above (C3) it is somewhat unclear how many interviews and participants took part since the calculation does not add up.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment
The author has outlined how the data was analysed in “analytical procedure” p. 10. On a positive note the author has also specified that the data were analysed using five questions which deal with noisy silence. Moreover, these five questions were suggested by another author/researcher (Linde). Thus, the questions were not merely something that Löfgren himself constructed. The author has not directly specified who analysed the data but since it was not specified it is likely that it was the author of the article.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall the study is conducted with adequate transparency. Eg the author mentions the frequency of certain narratives. However, there were some issues that were unclear in relation to the data collection (how many interviews/ interviewees) and in relation to data analysis (who analysed the data? Further description of data analysis?).
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The author has not taken any direct measures to avoid selective reporting bias. It seems that it was only the author who analysed the data. Thus, the issue of ensuring the validity of the results with another researcher appeared absent.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author has very briefly stated that he explained "the ethical terms of participation". He has outlined that he has informed the participants of the project and that they agreed to participate. The author has not mentioned issues of anonymity and the right to withdraw. The author has used names when making quotes. It is unclear if these names are real or pseudonyms.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Overall, it is relevant to use an exploratory approach to address a broad research question. So this approach is relevant. The data of the study only involved life history interviews of preschool teachers. This type of data was intuitively relevant for the research question.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The author has not directly dealt with the issues of reliability and validity. However, there is a good description of the data collection, thus it would be possible to repeat the procedure of data collection. The questions were not outlined specifically, however, there was a good description of the focus of the interviews. The author has interviewed a wide sample from different schools, thus, this is positive in terms of the generalizability (validity) of the results. Interviews were transcribed in full and can therefore be reanalyzed.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
The author has not directly dealt with the issues of reliability and validity of the analysis. However, the author has described the five questions of the analytical process, thus it would be possible to replicate this. Whether this approach is a valid way of dealing with the research question can be questioned. The author is looking for "noisy silence" in the data and not surprisingly he finds and concludes that there was "noisy silence" in the data.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The author did not apply a design or method to rule out errors or sources of bias. Overall, it is relevant to use an exploratory approach to address a broad research question. So this approach is relevant. However, the author has not considered measures to avoid bias or errors. The author does not mention that more researchers were involved in the analysis. It thus appears that he was the only person analysing the data, this could give rise to selective reporting bias.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
Reviewer 2: But the author does however clearly place the study in a historical context.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - Yes, please justify assessment
Reviewer 1: The reviewer is not convinced of the validity of the findings. On a

positive note the author has provided previous research to support his conclusions. Reviewer 2: No.

ID 27413026: Løvgren (2015)

Løvgren Mette. 2015. "Emotional exhaustion in day-care workers". *European early childhood education research journal* 24(1):157-167.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on August 22nd, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Exploration of relationships
The relationship between various work-related and background variables and emotional exhaustion among day-care workers.
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
Day-care workers answer a survey on emotional exhaustion (EE)
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
Preschool teachers and assistants
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
Preschool teachers and assistants
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Health
The emotional health of day-care practitioners
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
 - B4: The institution in society (multiple coding allowed)

- Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The researcher relates the study to other research within the field and presents findings from similar studies. The researcher argues for the relevance of studying this particular subject in this particular context (the relevance of using Norway as a case, see page 158).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study is clearly stated as identifying the work attributes that contribute to emotional exhaustion among day-care practitioners and to assess whether there are any differences in the levels of emotional exhaustion between preschool teachers and assistants. The relevance of studying emotional exhaustion among day-care workers is argued for. The author also clearly states her hypotheses on page 160.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample used for the statistical analysis is presented and consists of 2549 day-care workers (1192 teachers and 1357 assistants, see page 160). The selection of the sample is described as random. On the day-care center level, each manager selected the respondents, meaning that the exact selection criteria are unknown, as presented by the author on page 160. The response rate is given and shortly reflected on (page 162). The final sample is assessed by the author as sufficient for assuming generalizability. No non-response analysis is carried out. It is somewhat unclear if the sample presented is the achieved sample (the number of responses) or the initial sample (total number of questionnaires distributed). It is not clear whether the response rate is calculated into the sample or not. Also, the sample is presented as being both above and below 2500 at different points in the text, which is slightly confusing.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The explanatory, dependent and control variables are all adequately described. The measurement of emotional exhaustion is also described, however the exact format of the questionnaire used is not clear. The author discusses the response rate and sample size (e.g. on page 162).
 - C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment
As mentioned under C4, the variables included for analysis are all clearly presented. The statistical analysis is presented in a short, but adequate format, including tables and clear indications of p-values.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is presented with sufficient transparency. The article is rather short, but the descriptions provided are generally clear and adequate.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement is made.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports fully on the variables presented, as specified in the aims and hypotheses of the study.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 160, the author states that participation in the study was voluntary and that informed consent was ensured. The data set does not contain data that can be used to identify individual employees or day-care centers (anonymity). It is stated that the manager of each center was responsible for respondent selection. This may lead to potential biases (e.g. purposeful selection of employees with low levels of emotional exhaustion), but this is primarily a question of reliability rather than ethics.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The use of a survey followed by statistical analysis seems well suited for addressing the relationship between emotional exhaustion and different work-related variables and background characteristics. The sample used is large and covers 588 day-care centers, making it possible to include a range of variables while keeping sufficient degrees of freedom (page 158). The use of this particular approach and context is argued for by the author.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
First of all, the data collection is sufficiently described, including details on the

sample and the different variables and measures used. The internal consistency of the emotional exhaustion scale is estimated using Cronbach's Alpha, showing a satisfactory coefficient of 0,88 (see page 161). In terms of reliability, it could be a problem if the selection of participants by center managers was biased in some way (e.g. purposeful selection of respondents with a low degree of emotional exhaustion). There is no way of knowing whether this may be the case, but the fact that the author openly states this limitation is a mitigating factor. On page 162, the author reflects on the vulnerability in using single item measures of job characteristics, and openly states strengths and limitations to the study. Finally, the author reflects shortly on the size of the sample, although not performing a non-response analysis.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The author gives short, but adequate descriptions of the data analysis and presents numerical data and p-values in tables. Control variables are included and tested for, as well as the significance of the differences between groups. The statistical analysis includes testing for multicollinearity (two or more predictive variables being highly correlated) - multicollinearity is assessed as not being an issue in the analysis, see page 162. Overall, it seems that all necessary tests and controls are performed.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The author reflects on the size of the sample and assesses it as sufficiently large, even with the relatively high drop-out rate (see page 162). The author reflects on selection bias on page 159, stating that focusing on emotional exhaustion as opposed to burnout helps to reduce the risk of selection bias. This is due to the fact that emotional exhaustion is present both in early and late stages of burnout, meaning that using EE as an indicator helps to include employees with a short tenure who are moving towards burnout. No non-response analysis is carried out, therefore it is not possible to exclude the risk of some groups systematically choosing not to respond. Furthermore, the selection of respondents at the day-care center level is unknown (possible selection bias), however, the centers themselves were randomly selected (see page 162). Overall, sufficient statistical procedures are carried out to handle potential biases and alternative explanations (Cronbach's Alpha, multicollinearity, control variables). Also, the author openly reflects on potential limitations which is a strength of the study.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to other groups with the similar characteristics
The author addresses generalizability on page 162. It is somewhat difficult to assess whether the author judges the generalizability to be at the population level or towards groups with similar characteristics.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The conclusions are overall plausible and based on a sound statistical analysis. A few of the points made in the conclusion however seem a bit thin or slightly towards the direction of guesswork. This is the case when e.g. stating on page 165 that the emotional strain pertaining to parent and teaching-related tasks is surprising, given that teachers should be trained for this. Why is it surprising that working closely with children and their parents can be emotionally draining? Teacher training and education notwithstanding, working closely with other people every day can be challenging and demands a lot of personal engagement and emotional commitment. Also, the idea that a gap between childcare workers' attitudes and the actual daycare use might strain their relations with parents seems a bit suggestive (and the author also does present another suggestion which she finds to be more likely). Lastly, the author finds that age is correlated with EE (emotional exhaustion) for teachers, in the sense that as age increases, EE decreases. The author assesses this to be a result of either increasing age having a protective effect or the so-called suicide effect, where the most exhausted workers choose to leave the job. Is it however not possible that this finding could be due to older workers being more experienced, both professionally and personally? Since work experience is included in the statistical testing, and multicollinearity is tested for, this may not be an issue at all. Apart from these critical points, the findings and conclusions of the study are plausible, trustworthy and empirically founded. Reviewer 2: This is a study with high transparency and done with proper quantitative methods and clear research questions (hypotheses). The discussion and conclusions are well related to the data analysis and sampling procedure.

ID 29255318: Lyster (2016)

Lyster Solveig-Alma Halaas, Lervåg Arne Olav, and Hulme Charles. 2016. "Preschool Morphological Training Produces Long-Term Improvements in Reading Comprehension". *Reading and Writing: An Interdisciplinary Journal* 29(6):1269-1288.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on September 29, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Lyster, S. (2002). The effects of morphological versus phonological awareness training in kindergarten on reading development. Reading and Writing: An Interdisciplinary Journal (15), 261-294.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - "What works"
The impact of preschool morphological training on reading abilities.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
There is no information on sources of funding in the primary study, but in the secondary, the following statement is made on page 290: "This study was supported by grant 571.92.007 from the Norwegian Research Council".
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Longitudinal study
 - Experiment with non-random allocation to groups (quasi-experiment)
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Curriculum-based assessment
School reading tests that are part of the standardized Norwegian reading assessment battery.
 - Other (please specify)
Implementation of two different interventions. Diverse language tests plus a test of non-verbal IQ. Standardized reading tests
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 5 years
 - Children 6 years
 - Other, please specify
Follow-up testing of the same children in Grades 1 and 6
- A13: In studies with children, which age groups are covered?
 - Age 3-6
 - Other, please specify
Follow-up testing of the same children in Grades 1 and 6
- A14: Who informs the study? (multiple coding allowed)

- Children 5 years
- Children 6 years
- Other, please specify
Follow-up testing of the same children in Grades 1 and 6
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
 - Other, please specify
Follow-up testing of the same children in Grades 1 and 6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Transition from day-care to school
 - Other, please specify
Language training interventions/reading abilities and literacy skills
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Working method/educational method
Specific language training interventions (morphological and phonological awareness training).
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors present findings from other research projects and relate their study to an overall research field. The authors also provide relevant information on the structure and regularity of the Norwegian language, as well as on teaching traditions in Norway concerning literacy (no systematic teaching of letters and no reading instruction before school entry).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The aims and hypotheses for the study are clearly stated on page 1272-1273, and the authors argue for the relevance of their particular investigation. The primary aim of the study is to evaluate the long-term effects of preschool morphological awareness training on reading comprehension 6 years later. This is done by presenting follow-up data from children in an earlier intervention study that examined the effects of morphological and phonological awareness training on reading development. Thus, the present study seeks to assess whether the effects found in the previous study persist over the long term. All in all, the authors thus evaluate the effect of morphological awareness training delivered in preschool on reading ability at the end of Grade 1 and five years later, in Grade 6.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The authors provide adequate information on the sample as well as on sampling procedures in pages 1273-1274 and again in pages 1276-1277. The authors provide adequate explanations as to why the sample size for the control group is so small. When comparing the primary and the secondary studies, there is some confusion as to the actual sample size for the original study. This is stated as 269 in the primary study and 273 in the secondary study (which is lowered to 225 when excluding early readers and children, where information on maternal education is not provided). The samples of children in the intervention and control groups also differ from the primary to the secondary study, which may be due to differences in what is reported (initial sample vs. achieved sample). This, however, causes some confusion as to the actual sample size for this study. The authors do not provide an adequate explanation as to the differences in sample size between the two intervention groups at the start of the study - why are there more children in the morphological awareness group? In the follow-up study, the authors do address this lack of balance in terms of how to avoid biases, but an adequate explanation for this lack of balance is not provided for the initial study.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The authors provide adequate information on both the interventions implemented as well as on the measures tested. In the descriptions of the interventions, adequate information is presented as to provide the reader a sense of the training and activities taking place. The authors also clarify the conditions surrounding the control group (what activities did they attend?). When describing the measures used, the authors reflect on issues of reliability (e.g. test-retest

reliability, ceiling effects and using results from standardized assessment batteries).

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analysis of the data is presented in correspondence with common rules for statistical reports, with tables and figures provided as well as information on control procedures etc.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is reported with adequate transparency, however with some minor uncertainties pertaining to the descriptions of sample size (which seems to vary from the primary to the secondary study).
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Yes, the authors provide a balanced report, in which they comment on all relevant variables and provide descriptions of potential limitations and biases. The research questions for the study are fully answered.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
The authors present no ethical considerations, which is problematic given the nature of the study. When implementing interventions targeting young children, including extensive testing batteries, issues of research ethics must be addressed.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design is highly logical and in correspondence with common standards for testing the efficacy of interventions. The authors reflect on the potential limitations pertaining to this particular study design (e.g. non-random control group, group imbalances etc.).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors reflect on the difficulties pertaining to the non-randomness of the control group on page 1272, where it is stated that "Interpreting differences

between the training groups and the control group is difficult since the control group was not formed by random assignment as were the two experimental groups, our analyses, however, control for differences between the groups at pretest". The authors thus address these difficulties by controlling for a range of variables known to be related to children's reading comprehension, including maternal education, vocabulary, phonological awareness and non-verbal ability. The authors provide adequate explanations for the small control group sample in pages 1273-1274 as well as in the secondary study. In these pages, they also explain the training offered to teachers in the intervention groups. On page 1276, the authors reflect on the loss of participants at follow-up and the lack of balance between group sizes, and they describe the measures taken to minimize the possibility of the study outcomes being biased due to these issues (MCAR-test, testing for differences between schools, control variables and drop-out analyses). The authors also reflect on the schools probably being relatively homogenous in terms of the reading instruction provided and the teachers present at different schools (who attended the same continuing education courses and got the same community teaching support). See pages 1276-1277. When describing the measures tested, the authors provide alpha estimates and reflect on potential ceiling effects pertaining to the Grade 6 reading tests. On page 1285, the authors report on the fidelity of the interventions, stating that videos from teaching situations point to a high degree of fidelity. No further information on fidelity measures is provided.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
As described in paragraph C11, the authors reflect well on potential issues of reliability pertaining to the study design. It is somewhat difficult for this reviewer to assess the complex statistical procedures used, but generally, the authors seem to implement all the necessary checks and controls in order to secure the validity and reliability of the study findings. On page 1279, the authors state that there were some imbalances between the groups on key background measures at the preschool level. The two intervention groups had higher values for mother's educational level than for the control group. The phonological awareness training group also scored significantly higher than the morphological training group on counting phonemes. It seems that these differences are controlled for, given the following statement on page 1281: "The positive effect of morpheme training in kindergarten on reading comprehension in Grade 6 was also confirmed when the preschool differences in mother's education, vocabulary, Raven's nonverbal abilities and phoneme awareness were controlled in a second model". The authors describe statistical measures to handle missing values on page 1280 (full

information maximum likelihood). The authors also state that the small sample size for the control group may lead to biases in effect sizes (see pages 1280-1281). This is seemingly checked for. In the same pages, the authors furthermore openly reflect on the possibility of overestimation of effect sizes due to ceiling effects.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The authors present adequate and valuable reflections on potential biases and general limitations to the study. On page 1285, the authors present several limitations, including the small sample sizes for some groups and the potential ceiling effects related to the Grade 6 reading measures. The authors are open as to the fact that ceiling effects for the Grade 6 reading measures may have led to larger standardized effects for the morphological intervention. In general, the authors seem to implement all possible checks and control in order to handle potential biases and measurement errors. In the secondary study, the authors present additional information on the control group condition that should maybe have been included in the primary study as well. This information points to the fact that the control group was regularly visited by the researcher, meaning that this group received more attention from people outside the pre-school than the experimental groups (see pages 266-267 in the secondary study). Furthermore, information is provided on the print exposure for the control group, which is relatively extensive (this is not the impression gained when reading the primary study). In page 265 of the secondary study, the author furthermore reflects on the fact that if teacher experience and interest should be counted as factors potentially influencing the results, the control group should be at an advantage.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
When commenting on the implications of this study for practice, the authors make the following statement: "The present study, along with earlier research, suggests that morphological training may be an important part of early reading programmes alongside phonological awareness training. Although we must develop further knowledge of "how, when, and why morphological awareness instruction contributes to students' literacy development" (Carlisle), we know enough to include morphological awareness training as a valuable component of preschool language programmes (especially if school starts as late as 6-7 years as it does in Norway) and early reading programmes."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)

- No, please justify assessment

Reviewer 1: The authors present their findings in relation to other studies within the field, and there is a general openness as to potential biases and limitations pertaining to the study design. This reviewer finds it somewhat confusing that the main finding of the secondary study seems to be that the effects of training varied according to maternal education, when this finding is not addressed in any length in the primary study. Of course, the primary study is a follow-up study, with different results and a focus on other research questions (maybe maternal education is not relevant for the Grade 6 results). However, it seems to this reviewer that the authors should maybe have addressed the results of the secondary study to a larger extent than is the case. Reviewer 2: No.

ID 27392507: Magnusson (2016)

Magnusson Maria, and Pramling Niklas. 2016. "Sign making, coordination of perspectives, and conceptual development". *European Early Childhood Education Research Journal* 24(6):841-856.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
21/7-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
The authors refer to a previous study (Magnusson & Pramling, 2011) which this study builds upon and extends p. 853. However, the data of these two studies are different, thus, it is an extension of the previous research and they do not build on the same data.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
 - Experiment with non-random allocation to groups (quasi-experiment)
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 4 years

- Children 5 years
- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working method/educational method
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The background of the study is well described. It includes an introduction and a theoretical framework. Moreover it includes a presentation of research on relevant topics of the study: teacher-child communication and children's symbolic development.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The research aim is clearly reported in p. 843. The broad aim of the study is described as well as the more specific aims of the study. The study investigated how children (aged four to six) through communicative engagement with their teachers around their own drawings are supported in representational insight i.e. going from indicative sign-making to symbolic understanding.

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment

There was very limited information on the sample of the study. The authors have provided the following information: Two teachers and 12 children participated. (However, in the results only conversations with 3 children were presented). The age range of the children was provided: It was 4 to 6 years old. It was unclear how and why the particular preschool was chosen, and roughly where the preschool was located. Was it urban, suburban or located in the countryside? In addition the authors do not actually specify that the study was carried out in Sweden. Reviewer 1 assumes that this was the case, because the authors are from Sweden and refer to Swedish studies, but it is not actually stated in the article that the study was carried out in Sweden.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

There are good details on the general content of the sessions with the children and how they were taking place. The authors described that the children were first filmed in small groups drawing with the teachers. The authors outlined what activities were happening in the sessions. In a follow-up session the individual children and the teachers were drawing together while conversing. On a minor note it is unclear how the sessions were filmed. Did the authors put a stationary camera or did a researcher actively film the interaction between the children and teachers? Having a person observing behind a camera can be slightly more intimidating than just having a camera recording on its own.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - No, please justify assessment

The authors provide some information on the analysis. The authors write: "The analysis focuses on how teacher and child negotiate meaning and what the children show that they discern, particularly if and if so, how they show that they separate the two components, the symbol and the background object", p. 847. The authors write that they are analysing three evolving conversations between teacher and child. In this manner, the authors explain the analytical procedure. The authors are then proceeding to analyze the excerpts from the three examples in the article. And the article shows that the interpretations and conclusions the authors make clearly are connected to the excerpts. This is a positive feature. The authors have provided insufficient information in relation to how the three cases were chosen. The authors merely state that the three examples are chosen because they illustrate qualitatively different understandings of symbols. But how this was carried out practically is unclear i.e. did the two researchers independently arrive

at these three examples? Or did one researcher find the three examples and then the second researcher agreed?

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
There is both transparency and lack of transparency in the study e.g. many elements are clearly and concisely described. However, there is also some information missing e.g. information on the preschool and its location. Also it was unclear how the sessions were filmed. The analysis of the study demonstrates both transparency and lack of transparency. The procedure of analysis of the three examples is clear. However, how the authors arrived at the three examples is not transparent.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in this kind of qualitative research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The authors select three examples of conversations from a larger data set. Thus, one may argue that the authors use selective reporting bias by only reporting on these specific conversations. The authors do not specify how they arrived at these three conversations i.e. did the two researchers independently arrive at these three examples? Since there is no description of the procedure the process may be less systematic and therefore also prone to selective reporting bias.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The study follows the ethical guidelines of the Swedish Research Council. Thus, the authors have considered voluntary participation, the right to withdraw from participation, and anonymity. The authors have also given the children and teachers pseudonyms. The children's parents were signing a consent form allowing their children to participate. The children were also asked if they wanted to participate in the "drawing process" (the study), p. 846. Reviewer 1 finds no indication of ethical problems in this study and the authors appear to have taken ethical considerations very seriously.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
This is a tricky question. The research design has limitations but it also has strengths. The strength of using three examples with conversations from the large data set is that the authors can describe how during the course of conversation the

children arrive at qualitatively different understandings of symbols. This provides rich insight into the understanding of the different processes which the authors have chosen to focus on. The limitation is that there could be other ways in which children in general understand the symbols during the course of the conversation. As outlined above the authors have chosen to focus on three qualitatively different understandings of symbols, but there could be more understandings. As outlined earlier the selection of these three examples did not appear to be systematic and therefore the data could be prone to selective reporting bias. Moreover, it is difficult to draw any kind of generalization from this type of research design. The sample involves 12 children but only data from 3 children is presented in the paper – although it is said that they represent recurring patterns (p. 853). Thus, the data (sample size) underpinning the conclusions of the research is limited.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Some aspects of the data collection methods would be easy to replicate and some would be difficult to replicate. It would be possible to replicate the steps of the activities of the children when they were filmed. There is some information on when the children were filmed e.g. at first they were filmed in small groups drawing with the teachers. The authors outlined what activities were happening at this point. In a follow up session, the individual children and the teachers were drawing together while conversing. How they were filmed is not entirely clear. The presence of a camera and a researcher could affect the interaction between the children and teachers. The authors have not addressed the validity of data collection.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
There is little information on the process of data analysis. The author merely writes that the three examples are chosen because they illustrate qualitatively different understandings of symbols. This is a procedure which is difficult to replicate. Moreover, this leaves room for potential bias. It is not really transparent how the authors arrived at the three examples. Moreover, the authors have not addressed the issue of validity. The raison d'etre of the study – namely that a cognitive phenomenon ie. children's understanding of symbols must be studied in context- adds ecological validity to the study. There is however no discussion of whether the findings differ from those found in experimental settings.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment

The authors have made considerations regarding the design. There are two different conditions for the two different sessions (Session 1: one teacher varies the cross and the other teacher holds the cross invariant. Session 2: one teacher varied the triangle and the other teacher holds the triangle invariant). This design seems to be a research design typically employed for an experimental research study testing the strength of each condition. The ecological approach makes sense, but there is a lack of discussion of how it differs from experimental settings. The research design could be stronger. Reviewer 1 is particularly critical towards how the authors arrived at the three examples. This is not transparent and leaves room for bias. The sample of 12 children is normally quite an ok number for qualitative research but this research merely relies on data from 3 children (selected among the 12 children), which weakens the generalizability of the study. On a positive note, the authors have rich data (qualitative data) which clearly illustrates some key points in relation to the research question.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment

The authors are generally cautious in their conclusions. They compare the results to previous research.

ID 29561318: Moen, (2016)

Moen K H. 2016. "Leadership for Developing Consensus of Perspectives on Children's Learning in Early Childhood Centers". *Varhaiskasvatuksen Tiedelehti - Journal of Early Childhood Education Research* 5(2):226–246.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
May 24, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
On page 233 it is stated that "This study was part of a larger research project on "Management for learning – Challenges in Early Childhood Education and Care in Norway" (2012-2017) and was funded by the Research Council of Norway."
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description

The following research question and sub questions are posed on page 228: How do ECC directors work towards achieving consensus among staff about their perspectives on children's learning? (1) How explicitly do the directors work to promote consensus among staff about their perspectives on children's learning? (2) How do the directors lead and organize the processes of this work? (3) What do they perceive as especially challenging in this work?
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder

On page 233 it is stated that "This study was part of a larger research project on "Management for learning – Challenges in Early Childhood Education and Care in Norway" (2012-2017) and was funded by the Research Council of Norway."
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview

Semi-structured interviews with directors of ECCs.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B

- B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Organization and management
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working with control documents
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - Management and organization
- B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
See p. 228-233.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The following research question and sub questions are posed on page 228: How do ECC directors work towards achieving consensus among staff about their perspectives on children's learning? (1) How explicitly do the directors work to promote consensus among staff about their perspectives on children's learning? (2) How do the directors lead and organize the processes of this work? (3) What do they perceive as especially challenging in this work?
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
On page 233-234 it is stated that "The sample consisted of sixteen directors of ECCs in three Norwegian municipalities that were partners in the main research project. Two of the municipalities (A, B) were quite large in the Norwegian context (> 170 000 inhabitants each), while the third (C) was relatively small (< 7000 inhabitants). The participating directors were drawn strategically in collaboration with municipal administrations to ensure variety of ownership and size of the centers. (...) Eight directors were employed in municipal centers, and

eight were employed in private ones, which were similar to the distribution of centers by ownership in Norway (Statistics Norway, 2016). There were four directors from four small centers (< 45 children), seven from moderate-sized ones (45-79 children), and five were directors of large centers (> 80 children). The number of children provided information about the directors' breadth of control and indicated differences in the size of staff at each center. Staff members varied between three to sixty-three and the number of buildings or houses were between one and three. Fourteen directors were women and two were men. All had early childhood teacher education qualifications, and fourteen had also participated in continuing education. They were educated as early childhood teachers from twelve to forty years ago. The participants have extensive experience in the field, but their time as directors of their current center varied between four months to thirty-two years."

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. On page 234 it is stated that: "Individual interviews with the directors were conducted in 2013. They were based on a semi-structured interview guide that addressed different themes about leadership and children's learning in ECCs. Leadership and perspectives on children's learning was one of eight themes in the guide. Under this theme, there were seven questions and some keywords of special relevance to this study. The interview guide was used in a flexible way, and the directors told stories about their leadership for developing common perspectives on children's learning." However, the author could with advantage have provided examples of questions from the interview guide. Moreover, it is not stated who collected data for this study, it is merely stated that the present study was part of a larger research project on "Management for learning – Challenges in Early Childhood Education and Care in Norway" (2012-2017) (p. 233).
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. On page 234-235 it is stated that: "The transcribed material was analyzed by NVivo software for analysis of the qualitative data. The data were coded and analyzed at several stages to produce main themes for this part of the research. At the first step, all materials about leadership work to promote development for consensus of perspectives on children's learning were sorted out as one large theme or 'node' according to NVivo. Then, the analysis of the interviews was based on a stepwise-deductive-induction approach (SDI). (...) Initially, coding was very similar to the concrete content of the text. This similarity provided the basis for categories that were merged into fewer main

themes. These themes were checked against empirical data, which often provided the basis for change and adjustments of categories and themes."

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes - considering that this is a short journal article.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 223 it is stated that "The research project was approved by the Data Protection Official for Research and was conducted in accordance with ethical guidelines for research complied by the Norwegian National Research Ethics Committees (The Research Council of Norway, 2016)." The author does not further discuss ethical aspects of the study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. It seems that interviews with directors are sufficient enough. However, a more extensive data material would have given a more solid base for conclusions, and thus data triangulation would have been desired. This is also addressed by the author herself (see p. 235).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. There is limited information on the data collection. It is stated that the empirical data were collected within the research project on "Management for learning – Challenges in Early Childhood Education and Care in Norway". However, the author provides only little information on interview guidelines, and it is unclear who carried out the data collection.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The methods of data analysis are described at p. 234-235, and

excerpts of the transcriptions are used in the analysis to illustrate the author's interpretations. Still, it is assessed that the transparency related to data analysis procedures could be better. For instance, the study provides no information on how many researchers/coders were involved in the analysis of the collected data, nor does the author mention inter-rater agreement or cross-checking of interpretations.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
On page 235 it is stated that: "Although the sample was not representative of the population of all centers in Norway and the results cannot be generalized, the breadth of the sample indicates that the results are recognizable among many directors in Norway."

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The research questions are answered, but the study remains descriptive and does not provide deeper insights that would improve practice or develop theory.

ID 29255324: Moser (2016)

Moser Thomas, and Reikerås Elin. 2016. "Motor-Life-Skills of Toddlers--A Comparative Study of Norwegian and British Boys and Girls Applying the Early Years Movement Skills Checklist". *European Early Childhood Education Research Journal* 24(1):115-135.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Commenced 6/10-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
*The study involved data from two different research projects: one UK and one Norwegian research project. The Norwegian research project was called The Stavanger project and the authors have referred to the project website: <http://lesesenteret.uis.no/research/the-stavanger-project/> The UK research project was: Chamber & Sugden (2002, 2006). Chambers ME, Sugden DA, (2006). *Early Years Movement Skills: description, diagnosis, and intervention*. West Sussex, England: Wiley Publisher Limited. Chambers ME, Sugden DA, (2006). *The identification and Assessment of Young Children with Movement difficulties. International Journal of Early Years Education*, 10, 157-176.*
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - Yes, the study has a broad focus (please specify)
The study compares Norwegian and British boys' and girl's motor skills. The reviewers will focus on the Norwegian part of the study. Thus, the British data collection and results will be ignored in this review.

- A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Exploration of relationships

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway

 - Other OECD countries, please specify
British children were assessed on The Early Years Movement Skills Checklist (EYMSC) which measure the children's motor abilities.

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative

- A10: What is the design of the study? (multiple coding allowed)
 - Cross-sectional

 - Secondary data analysis

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Physical test
The Early Years Movement Skills Checklist (EYMSC) was used to measure the motor-life-skills of toddlers.

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 2 years
The Norwegian sample of children was between 30 and 33 months old. The British children were 3 years old but these children are ignored in this review.

- A13: In studies with children, which age groups are covered?
 - Age 0-2
The Norwegian sample of children was between 30 and 33 months old. The British children were 3 years old but these children are ignored in this review.

- A14: Who informs the study? (multiple coding allowed)

- Children 2 years
The Norwegian sample of children was between 30 and 33 months old. The British children were 3 years old but these children are ignored in this review.
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
The Norwegian sample of children was between 30 and 33 months old. The British children were 3 years old but these children are ignored in this review.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Children's physical action and development in day care
motor skills
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
The authors in this article discuss motor-life-skills in a sample of 33 months children in Norwegian daycare and compare the findings with the results from a similar British sample.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
This article does not discuss the physical environment as such but it investigates the motor-life-skills in a sample of 33 months children in Norwegian daycare.
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The authors have adequately described the background of the study e.g. they have outlined the terminology, importance of children's motor competence and skills in ECEC and gender. The authors' introduction also naturally lead to the aim of the study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The research questions were clearly outlined in p. 6 and the introduction leads up to the research questions. This article investigates the motor skills in a sample of 33 months old children in Norwegian Early Childhood Education and Care institutions and it compares them to the results of a similar British sample.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
There was a clear and concise description of the Norwegian sample in p. 7 under

the heading "Recruitment and participants". In this section, the authors describe the number of children (1083 children), 527 girls and 556 boys. The age of the children was described. All public and private kindergartens were invited to participate. The number of participating institutions was provided: 185 different units of 87 ECED institutions but it is unclear how many institutions and units were asked to take part. It was also unclear if all children in the participating institutions were taking part. The number of institutions and children (guardians of children) asked compared to the number of institutions and children participating was lacking (information om frafald). If there was a large discrepancy between the two numbers it could indicate a skewed sample.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment

The data collection was clearly described in p. 8 under the section "Data collection". The data collection involved familiar adults observing the children and assessing them on the EYMSCO. This is an unobstructive measurement tool i.e. it does not disturb the children in their natural activity. The data was collected independently by two staff members for each child. The data was entered into SPSS by two research assistants. One assistant registered the data and the other controlled the data registered. They alternated tasks. The authors have clearly described the instrument used to measure the children's motor skills in p. 7. It is worth noting that the authors used the age band three to five years but the Norwegian children were below the age of three. They were between 30-33 months old.

- C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment

The quantitative data analysis was described adequately. In this study, the authors explain that the observations of the motor skills were actually ordinal scale level, but the data was treated as interval scale level.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment

The transparency of the study is very good. The authors have provided full and extensive details on the data collection and data analysis. It was somewhat unclear how many institutions and children were asked to take part compared to how many took part (fracfald) (see C3). This could have been elaborated. However, overall it is a minor issue compared to the otherwise very detailed description. In addition the article was very well structured and written in a clear and concise language, which gave the reader a good overview of the study.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)

- No, please justify assessment
This is not common practice in research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on all the variables described in the aim. They have reported on the EYMSC scores for each of the four sections and the total score (see p. 10). They have reported on the intercorrelations among sections and total scores in EYMSC and gender differences in the four sections of EYMSC and in the total score (p. 12).
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The authors have taken ethical considerations very seriously. They write that young children are "vulnerable, deserve respect and must be met in a way that does not expose them to any physical or psychosocial risk of being harmed. The children should experience participation as meaningful and regarding. ...In general, the research project intends to be neutral or even empowering for the children's everyday live in the ECEC-institution", p. 19. In the report it was also clear that the authors had followed these principles e.g. the adults observing the children were familiar daycare staff that the children already knew. In addition, the authors had chosen a data collection method which did not involve invasive tests of performance, but they involved non-invasive observations. The Data Protection Official for Research has approved this study. The participants gave informed consent. The participation of each individual child is based on the parents'/ guardians' informed written consent on behalf of their children. The authors mention the importance of anonymity, both at an individual and institutional level. This was also clear throughout the study where it was impossible to identify institutions and individual children or daycare staff.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The quantitative research design was well-suited to answer the research question. It involved comparative analysis of a very large Norwegian sample (N=1083) which involved roughly 50 percent boys and girls. Thus, each gender category involved more than 500 boys or girls. Overall, the research design was well-thought out before the authors commenced the study. The authors ensured the data quality by making two independent day care staff evaluate the motor skills of the children. The data registration quality was also considered; two research assistants alternated between registering the data and checking the data. It should be noted that the EYMSC was designed for 3 to 5 years old and the participants of

the study were children below the age of 3. This could be a problem. The authors themselves note this. They also argue that the children were only slightly younger than 3 and the instrument was appropriate for the children after having adapted the instrument. See p. 8.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The description of the data collection was very clear and it would therefore be possible to replicate the data collection process. The authors have clearly addressed the issues of reliability and validity in the study under the heading "Quality of data collection and analysis", p. 9. The authors ensured the data quality by making two independent day care staff evaluate the motor skills of the children. The staff observing and registering the motor skills of children were trained for the purpose of the study. The data registration quality was also considered; two research assistants alternated between registering the data and checking the data. 10% of the participants were randomly selected and two other research assistants entered the data set a second time in order to compare the degree of deviation between the two data sets. This control procedure revealed good consistency. The authors made familiar adults observe the children. This ensured that the children were observed in natural and non-invasive settings, which supported the validity of the data collected. The authors also address the reliability and validity of the instrument EYMSC. They write that the total score for inter-rater reliability is 0,96 ($p < 0.01$), thus highly significant in Chamber and Ogdens (2006) study. In addition the test-retest reliability is 0,95 ($p < 0.01$). This is very impressive. However, it should be noted that the EYMSC was used for younger children than it was designed for and the measurement tool was an edited version of the original. The authors described a process of great care in relation to the translation, but this process is not entirely transparent.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors have clearly described the methods for data analysis so this would be possible to replicate. The authors clearly address the validity and reliability of the data collection and data analysis in a section called "Quality of data collection and analysis", p. 9. This section mainly focuses on the quality of data collection which is also most relevant when dealing with quantitative data. In relation to the quality of data analysis the authors write that: "The frequency analysis was carried out for each variable to check if each variable was within the range of

possible values. The few deviations discovered were straightened up in the data set", p. 10.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The authors have taken numerous measures to rule out bias or errors in this study in relation to the data collection quality. The authors ensured the data quality by making two independent day care staff evaluate the motor skills of the children. The staff observing and registering the motor skills of children were extensively trained for the purpose of the study. The data registration quality was also considered; two research assistants alternated between registering the data and checking the data. 10% of the participants were randomly selected and two other research assistants entered the data set a second time in order to compare the degree of deviation between the two data sets. This control procedure revealed good consistency. The authors had decided that familiar adults collected the data, this ensured that the children were observed in natural and non-invasive settings, which supported the validity of the data collected. The authors also address the reliability and validity of the instrument EYMSC. They write that the total score for inter-rater reliability is 0,96 ($p < 0.01$), thus highly significant in Chamber and Ogdens (2006) study. In addition the test-retest reliability is 0,95 ($p < 0.01$). This is very impressive. Again it should be noted that the EYMSC was used among younger children than intended and it was an edited version of the original. It appeared that great care was taken in translation, but this process is not entirely transparent.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The results of the study are quantitative and include significance analysis. The results appear reliable and the authors have drawn fair conclusions based on the results. Thus, the authors have not over-interpreted the findings.

ID 27873353: Myrstad, (2016)

Myrstad A, and Sverdrup T. 2016. Første-fots-erfaringer gjennom vandring - de yngste barnas samspill med omgivelsene i barnehagen. In *Blikk fra barnehagen*, edited by Gulpinar T, Hernes L, and Winger N, 97-118. : .

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review commenced 1/8-2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
This study is part of a larger project called "Searching for qualities, relation, play; aesthetics and learning".
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
The study is funded by Norwegian research council (Norsk Forskningsråd, NFR)
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children between 0-1 years
 - Children 1 year
- A13: In studies with children, which age groups are covered?
 - Age 0-2
- A14: Who informs the study? (multiple coding allowed)
 - Children between 0-1 years
 - Children 1 year
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
- Section B
 - B1: Main topic(s)? (multiple coding allowed)

- Day-care quality
- Children's physical action and development in day care
- Perspective of the child
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Physical environment
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment

The general context of the study is adequately described. There is a description of the theoretical background and also information on previous research. Reviewer 1 would have liked a little more information on the larger project of the study e.g. more detailed information on the pilot project (mentioned in p. 98) which the authors claimed was the background for the current study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment

The aim of the study is clearly described p. 99. The study focuses on how young children's walking can be viewed as a quality aspect, a visible expression on how children experience the everyday life of the daycare. In this article, the authors will focus on the children's walking and transference (forflytninger) in relation to their interaction with the social and physical environment. ("På hvilken måte kan de yngste barnas vandring betraktes som et kvalitetsaspekt, et synlig og hørbart uttrykk for hvordan barn opplever barnehagehverdagen. I denne artikkelen vil vi se på barnas vandringer og forflytninger i lys av deres samspill med sociale og fysiske omgivelser. " p. 97). Reviewer 2: The research question is in reality a cautious and methodological one: In what way can the walking around of children serve as an approximation of the children's experience of quality in kindergarten? The aim is also described other places, e.g. p. 104. It is however only in p. 104 that the authors specify that the aim involves the concept "affordance".

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
There is very limited information on the sample of the study. The authors specify that the data involved field notes in 3 daycare institutions (one departmental daycare and two base daycare institutions). It is unclear why these daycare institutions were chosen and how they were recruited. It is unclear where the daycare institutions were located e.g. urban, suburban etc. Moreover, the number of children in each institution is unclear. The authors aim to investigate the perspectives of children aged 1-2 years (p. 97), however, in the methods section they write that they focused on children below the age of 2 (p. 105), thus, the age range of the children is somewhat unclear.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There is some information on the data collection. The full data set involves field notes both from participating observations with and without camera. Moreover, the data material involves video records of children in daycare. The authors have specified what participant observation involved. The data was collected by both researchers. The observers had observed for 30-40 hours in each of the three daycare institutions. Thus, the size of the data material was somewhat visible. The authors did not specify what the field notes involved e.g. were they written during or after the observation. However, overall there was an adequate description of the data collection.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes, partly. There is a description of how the video material was coded p. 105-106. And the authors write that they looked through the field notes and video material several times and combined the field notes with the video material. The authors present two contrasting examples of walking in the day care institutions. How the authors arrived at these two examples is unclear. However, the authors claim that these examples are illustrative in terms of the topics at hand. The authors draw conclusions from these examples. The authors write that they treat each kindergarten as a case, so the hypotheses can be tested from one case to the next (p. 105). Reviewer 1 cannot see how the authors have practically done this in the book chapter. The authors merely claim this, but if and how it was actually done is unclear.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the transparency of the study was ok. It was possible to work out the aim,

method and analysis. Reviewer 1 would have liked more information on how the authors arrived at the 2 examples that made up the results in the study. There is also a lack of transparency in relation to the ethical practice and the sample of the study.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in this kind of qualitative research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The authors have not actively tried to reduce the selective reporting bias, e.g. they have not specified that the two researchers independently arrived at the results. In addition, the authors have chosen 2 examples of walking from two different daycare institutions from a large dataset with three daycare institutions. The results are based on these two examples. Thus, a selective reporting bias is possible.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
This is a tricky question to answer. The authors have not presented any considerations in relation to ethics in the book chapter. The ethics of the study is therefore impossible to evaluate. Given that the authors works with very young children (under the age of two), ethical considerations is particularly important. The authors have used names of the children, but it is unclear if these names are pseudonyms or their real names.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It was relevant to use a qualitative research design for the research question. Moreover, using a participatory observation technique was relevant for getting an in-depth understanding of the children's perspective of quality in daycare. However, Reviewer 1 would have liked more information on the data analysis. The approach of choosing two situations left room for selective reporting bias.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors have provided sufficient information on the data collection. The validity of the data collection seems to be ok e.g. the authors attempted to get an insight into the children's perspective by participatory observation (walking along

with the children). The authors have not themselves mentioned the validity of the data collection.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
The authors have provided some information on the coding of the video material. However, more importantly, it is unclear how the authors arrived at the two examples which make up the results of the study. The analytical steps could have been described in more detail. It seems somewhat random or selectively reported that the authors have picked out the two examples. Hence, the validity of the data analysis is questionable. The authors have not addressed the issue of validity.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - Not at all, please justify assessment
Reviewer 1: The authors have not made efforts to reduce possible bias or errors. The reviewer would have liked more information on the data analysis. It is not clear how the two examples relate to all the data from three institutions. This also means that there was a possible selective reporting bias. Reviewer 2: The two examples are used to show the variability in children's wandering experiences. The authors draw conclusions that seem plausible and with reservations.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The authors write that the two examples do not provide sufficient grounds to draw generalized conclusions, p. 112.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The authors are cautious in their conclusions. As outlined in C14, they address that the two examples cannot lead to generalized conclusions. The findings are also related to previous research findings and put in a theoretical framework.

ID 29711478: Nilsen, (2016)

Nilsen M, Lundin M, Wallerstedt C, and Pramling N. 2016. The tablet computer as a mediational means in a preschool art activity. In *Understanding digital technologies and young children: An international perspective*, edited by S Garvis, and N Lemon Eds, 139–154. London: Routledge.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
1st of September 2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Nielsen, M (2014) Barnsaktiviteter med dattorplattor i förskolan. Gothenburg Universitet
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
to investigate how tablets are used in a pre-school setting in an art project

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - One-to-one interview
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
1-5
 - Age 3-6
1-5
- A14: Who informs the study? (multiple coding allowed)

- Educational staff: Practitioner
- Children 4 years
children of ages 1- 5 are observed but specifically observation of one child of age 4 (Vera) has been studied in this chapter, and Greta (5 years old) becomes part of the analysis too as she "comes up to the table and gets involved in the activity" (p. 145)
- Children 5 years
children of ages 1- 5 are observed but specifically observation of one child of age 4 (Vera) has been studied in this chapter, and Greta (5 years old) becomes part of the analysis too as she "comes up to the table and gets involved in the activity" (p. 145)
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
children of ages 1- 5 are observed but specifically observation of two children of age 4 (Vera) and 5 (Greta) have been studied in this study
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
The study is looking at how tablets are supporting childrens learning in a preschool setting
 - Technology and ICT
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Use of tablets/ICT in preschool
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The data extraction of this study has been informed by the larger study from 2014, as such the context of the study is adequately described.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The data extraction of this study has been informed by the larger study from 2014, as such the sample is well described
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The data extraction of this study has been informed by the larger study from 2014, as such the data collection methods are well described
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
It's difficult to assess from this study however when the original study is taken into consideration, the reliability and validity of data collection is sufficiently established.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
It's difficult to assess from this study however when the original study is taken into consideration, the reliability and validity of data analysis s sufficiently established.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The authors document the empirical basis for their analysis/reflections very well. Therefore, it is very easy to follow the findings and conclusions.

ID 27224225: Nilsson (2016)

Nilsson Emma. 2016. "Sociala konstruktioner i förskolans planeringssamtal : i en landsgränsnära förskola ". , Fakulteten för humaniora och samhällsvetenskap, Pedagogiskt arbete, Karlstads universitet PP Karlstad UL <http://urn.kb.se/resolve?urn=urn:nbn:se:kau:diva-39175>.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
August 29, 2017
 - A2: Type of publication (only one coding allowed)
 - Thesis/dissertation
Licentiatuppsats / Licentiate thesis.
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The overall aim of this study is to describe the preschool setting that is constructed in the preschool teachers' planning conversations with a special focus on the border context in which this particular preschool is located. Two research

questions are posed: (1) What conceptions about the preschool, the children and the preschool management are established in the preschool teachers' planning conversations, and (2) In what ways is the geographic location noticeable in the preschool teachers' planning conversations? (see p. 11)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - University/research institutions, please state the name of the funder
It is stated that this licentiate thesis was funded by means from Nationella forskarskolan för ämnesdidaktik i mångfaldens förskola, Förutsättningar och möjligheter för barns språkliga och matematiska utveckling och lärande (FoBaSM, Dnr 729-2011-4652).
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
The empirical material consists of video-recorded observations. The researcher alternated between observing passively with no interaction with the observed preschool teachers and actively observing with interaction (participant observation), for example by engaging in conversation (p. 36). The observations focused on monthly staff meetings in each of the preschool's two sections and staff meetings in which all staff members attended (this included both all-day meetings and meetings held in the evening) (see p. 40-41). However, the author also conducted more informal observations, for instance during coffee breaks.
 - Report of diary (field notes)
The author also conducted field notes as a supplement to the video observations (p. 46).
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?

- Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Children aged 1-6 years.
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - Curriculum
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working with control documents
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Inclusion/exclusion

- Management and organization
- B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in a historical and cultural perspective
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical frame of the study and previous research on e.g. preschool teachers' planning conversations are described (see page 12-34).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall aim of this study is to describe the preschool setting that is constructed in the preschool teachers' planning conversations with a special focus on the border context in which this particular preschool is located. Two research questions are posed: (1) What conceptions about the preschool, the children and the preschool management are established in the preschool teachers' planning conversations, and (2) In what ways is the geographic location noticeable in the preschool teachers' planning conversations? (see p. 11)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The sampling strategy and selection criteria are described at page 37-38. The selected preschool and the sample of the study (i.e. the participating preschool teachers and children) are only briefly described at page 40: In total, six preschool teachers (in Swedish: förskollärare och barnskötare) participated, together with 21 children aged 4-6 years and 13 children aged 1-3 years. All of the participating preschool teachers were women aged from 50 to 65 years with many years of experience within the field. The author does not provide any further information on the participants.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
This research project is an observation study of a two-section preschool in Sweden close to the Norwegian border. The data collection started in the spring of 2012 and was conducted over a period of four months. The empirical material

consists of 35 hours of video-recorded observations (p. 40). The researcher alternated between observing passively with no interaction with the observed preschool teachers and actively observing with interaction (participant observation), for example by engaging in conversation (p. 36). The author also conducted field notes as a supplement to the video observations (p. 46). The preschool teachers were observed in monthly staff meetings in each of the preschool's two sections and staff meetings in which all staff members attended (this included both all-day meetings and meetings held in the evening) (see p. 40-42). However, the author also conducted more informal observations, for instance during coffee breaks.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The theoretical frame of the study is well described at page 24-43. However, the author could have elaborated on the data analysis methods used. The analytical process is only briefly described which makes it a little hard to determine exactly how the collected data was analysed. The author states that the collected data were interpreted using social constructionist approaches and borderland theory, and that she conducted a qualitative content analysis (p. 42-43).
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. However, the author could with advantage have elaborated on the data analysis methods used and explained the analytical process in greater detail.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports on all variables aimed to study (i.e. the research questions posed), however avoiding selective reporting bias might not be possible in a study of this character.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author took account of the ethical guidelines of the Swedish Research Council for the Humanities-Social sciences applicable for the demands of information, consent, and confidentiality (see p. 44-45). On page 39 the author states that preschool teachers and parents of the participating children were informed of the aim of the study etc., and that informed consent was obtained from all

participating preschool teachers and all (but one) parents of the participating children. However, it is rather unclear whether other considerations of ethical standpoints were also taken into account, for example children's signs of disapproval during video observations, and the relationships of power between the researcher and the participating preschool teachers and children were considered. Nevertheless, from the author's descriptions of how she collected data, it seems that there are no ethical concerns or problems about the way the study was carried out.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, video-recorded observations seem appropriate for addressing the research questions posed in this study.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Some attempt. The observations were conducted over a longer period of time (four months), and the author briefly accounts for limitations of her data collection methods and reflects upon both advantages and disadvantages of e.g. having a large amount of video-recorded observations (see p. 45-47). It is a strength that the author also wrote down what happened in addition to the actions that were captured on video as an attempt to detect the broader context in which the preschool teachers act. This reduces the risk of missing out on important details and over-interpreting the observed situations. However, it is unclear to me whether the author conducted both participatory observation and video-observation as a combined method (see p. 36). Also, more information on participants would have strengthened the validity of the data collection.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. It is assessed that the data collection answers the research questions posed in the study. Throughout the analysis detailed transcriptions of video-observations and excerpts from field notes are used to illustrate and support the author's interpretations which are regarded as a plus. Moreover, the theoretical approach is well suited to examine the analysis. Theories and previous research findings are also used to reflect upon the findings (see discussion at p. 79-90), and the author accounted for the limitations of her empirical material (p. 45-47). However, the author could with advantage have elaborated on how she abstracted the qualitative data into concepts and categories. Moreover, she could have

elaborated on her pre-understandings. The author herself sees her pre-understandings as a positive insight (p. 48). However, she could with advantage have elaborated on her own bias, and how her background as a preschool teacher and her pre-understandings might influence or affect the study. This is only briefly touched upon (see p. 45+47). Also, respondent validation could have strengthened the trustworthiness of the conclusions.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
To some extent - however, one can never be certain in studies of this character.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Yes and no. The author focuses in a competent way how and which conceptions of preschool, children and leadership are constructed through the planning conversations of the staff. This part is theoretically well anchored and the author makes competent and wise methodological choices. However, the other research question about how the location close to a border and how the children's cultural and national character appear in the planning conversation is much more problematic. The Norwegian children are not seen as different from the others. An obvious explanation of this is that there is not any difference to observe. This is children living in Sweden, with one or two Norwegian parents, and children at the kindergarten age will normally speak the language of their peers (Swedish), independent of what language the parents are speaking at home.

ID 27988664: Norling (2016)

Norling Martina, and Lillvist Anne. 2016. "Literacy-Related Play Activities and Preschool Staffs' Strategies to Support Children's Concept Development". *World Journal of Education* 6(5):49-63.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
3/7-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The data used in this study was part of two other studies by Norling: Norling (2014). Preschool staff's view of emergent literacy approaches in Swedish Preschools. Early Child Development and Care, 184, 571-585. Norling, Sandberg & Almqvist (2015). Engagment and Emergent literacy practices in Swedish Preschools. European Early Childhood Education Research Journal, 24, ?.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
Swedish Research Council
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Video
 - Secondary data
The data used in this study was taken from two studies by Norling. For reference information, see A3.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2

- Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
litteracy
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study has been outlined in the introduction. The literature

review leads to and justifies the research question. A minor issue is that the introduction could have benefitted from some proof-reading. There were a few typing errors e.g. "as a whole, ,known as educare" (p. 49).

- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The authors have conducted a literature review and the results shows a lack of research in the particular area that the authors aim to investigate. The aims of the study have also clearly been outlined. "This study investigates language-promoting strategies and support of concept development displayed by preschool staff when interacting with preschool children in literacy-related play activities. The aim of the present study is to investigate preschool staffs' social language promoting strategies and support of concept development when interacting with preschool children in literacy-related play activities. Literacy-related play activities can be defined as events in which symbols, artefacts and communicative situations have an integrated role" (p. 49).
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The authors have described the participating preschool units well e.g. age of the children. The selection criteria for the data were also outlined. The authors have also outlined the number of preschool units: 6. They write that the sample is selected in three cities. A characterization of the participating preschool staff is largely absent e.g. gender, age etc. The authors have, however, outlined the educational background of the staff.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Overall there is a good description of the data collection process. The data involved video material with a hand-held video camera during play activities in small groups of 2 to 8 children.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
It was clearly explained how many authors were analyzing the data and in what order. The analysis involved two selection phases: 1) reducing the data material from 11 hours to 7 hours and 2) selecting the 39 two minute events among the 7 hours. Appendix 1 was used to select the 39 events among the 7 hours. It would have been helpful if the authors had explained how appendix 1 was applied. In addition, it was not entirely clear how the 11 hours of original video-recordings was reduced to the 7 hours that the authors analysed. The authors just write that it was reduced to 7 hours "in accordance with the aim of the study". Reviewer 1 is

unsure what this means practically. Two authors were using manifest content analysis to analyze the 39 events and the authors agreed on six themes. The authors write that the initial analysis was conducted by the first author and discussed with the second author. Not all, but many of the video sequences were discussed in terms of feasibility.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall the article is generally transparent in terms of the sample, data collection method and analysis. Overall, many aspects of the study were explained well. It was however somewhat unclear how the data material was reduced from 11 hours to 7 hours. There are some minor issues in the article that are not entirely clear, e.g. how appendix 1 was applied to analyse the data. In addition, there were mistakes in the article which left the reader confused. In the abstract, the authors have written that 39 minutes of video was analysed, but in fact it was 39 sequences of two minutes (thus 78 minutes of video).
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors have considered selective reporting bias. They have largely used two authors in the analysis; the first author did the initial analysis and the results were discussed with the second author. This is a positive aspect of the article. It is however not the strongest way of carrying this out: The authors could have independently analysed the data and THEN compared the results. Moreover, the analysis was not consistently carried out with two authors. And finally there was no indication of the level of disagreement/agreement between the two authors. Thus, it is difficult to conclude anything in terms of the inter-rater reliability.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The authors have addressed the issue of ethical practice in p. 52. Teachers and parents were given informed consent. The data was collected in line with ethical principles.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The authors have not justified the specific research design. Using an explorative research design appeared appropriate. Moreover, it was relevant to conduct

video-recordings as a way of observation. It is possible to analyze the preschool staff's strategies to support children's concept development from the qualitative data available.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors have not considered the validity of the data collection. However, it is worth noting that the authors write that the staff decided the two occasions that the researchers were welcome and that the days were representing typical days. Critics may argue that the staff and children's behavior may be affected by the presence of the researchers. Indeed it is not entirely clear that the data did represent a typical day. It would have been a positive feature if the researchers had visited the day care units on previous occasions to make the participants used to their presence.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, the steps of the data analysis were well-explained. It was a positive feature that the the authors considered inter-rater reliability of the analysis by including two authors for the most part of the analysis. However, the inter-rater reliability between the two authors was not actually established (see C8). Some steps of the analysis were not entirely clear, e.g. how the authors reduced the data from 11 hours to 7 hours.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
Reviewer 1: The authors have considered inter-rater reliability which is a positive feature of the analysis. They have clearly explained how the data was analysed and the themes were agreed upon among the two authors. This is likely to have reduced any bias of the analysis. They could have established the inter-rater reliability but this was not done (see C8). The authors have made the reader aware that the data collection (video record) can be affected by the fact that there is a person filming the situation. This effect could have been reduced by placing a stationary camera in the institution or having the researchers visit the institution before collecting the data. The effect that the researcher has on the field under investigation is generally a problem in much empirical research involving observation. Thus, it is a positive aspect that the authors have pointed out the limitation. They have taken some measures to reduce this problem: they write that

they were sensitive to distress shown by children and staff in their data collection. Reviewer 2: The main problem is however that the 39 2-minute episodes have been selected based on the criteria including play and where teachers “used strategies for creating a high level of instructional climate” (p. 52). This makes their finding of the six themes of events valid – but the conclusion that “the events as well as preschool staff’s timing in communication as well as interaction have a major role to support children’s conceptual development” (p. 59) somewhat circular.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
The authors do not address the issue of generalizability. It does however seem that the authors find the results generalizable to the population.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No. However, in the discussion the authors repeatedly write that the “study shows” e.g. the authors write that the study “shows that four and five year old children also need adults to confirm concepts in literacy related play activities” (p. 59). This is a very incautious statement indicating that the study’s results are generalizable to all 4 to five year old children. Generally the authors draw very incautious conclusions based on a restricted sample. In addition the authors make the above mentioned conclusion in the discussion, and it has not been addressed in the results section. Reviewer 2: No – as far as the teasing out of how and in what type of activities preschool staff support language development.

ID 29255330: Palmér (2016)

Palmér Hanna, Henriksson Jenny, and Hussein Rania. 2016. "Integrating Mathematical Learning during Caregiving Routines: A Study of Toddlers in Swedish Preschools". *Early Childhood Education Journal* 44(1):79-87.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
September 14, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
On page 80 it is stated that: "The empirical work in the study was carried out by two of the authors during their degree project (Henriksson, J., & Hussein, R. (2013). Blöjbytetts matematiska möjligheter. Pedagogisk kommunikation i skötrummet. [Mathematical possibilities in diaper change. Pedagogical communication in changing room]. Växjö: Degree Project Linnaeus University Sweden). The third author was the examiner for this degree project. The content presented in this article is a revised and expanded version of the original report."
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description

This article reports a Swedish study of mathematical possibilities during diaper changing in a preschool setting. Diaper changes were chosen to represent an everyday routine because it is one of the few situations in which a preschool teacher may have a moment with only one child at a time. A diaper change can be a communicative moment when the child can experience mathematics with a professional preschool teacher, but it can also be a moment of mechanical routine with no pedagogical context. The intention of this study was to investigate the mathematical potential pedagogues (i.e. preschool teachers and childminders) described in relation to diaper changing and to examine the ways this potential was put into action (p. 80).
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is a mixed methods research
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

The empirical material in the study was collected using non-participant observations and questionnaires. The observations were conducted before the respondents completed the questionnaires (see p. 81).
 - Questionnaire
 - Sound recording

Sound recordings of non-participant observations.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

Pedagogues (i.e. preschool teachers and childminders).

- No information provided on the age of the children
Reviewer 1: Probably under 2-3 since they are using diapers.
- A13: In studies with children, which age groups are covered?
 - Other, please specify
No information provided on the age of the children.
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
Pedagogues (i.e. preschool teachers and childminders).
 - No information provided on the age of the children
- A15: In cases where children inform the study, which age groups are included?
 - Other, please specify
No information provided on the age of the children.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
The learning of mathematics integrated in the daily caregiving routines in preschool, exemplified by situations of diaper change.
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both previous research on preschool mathematics and the Swedish context in which the study is conducted are described (see p. 79-81).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The intention of this study was to investigate the mathematical potential

pedagogues (i.e. preschool teachers and childminders) described in relation to diaper changing and to examine the ways this potential was put into action (p. 80).

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment

Overall, yes (considering that this is a short journal article) - however, the article lacks a description of the participating children. How many children participated and how old were they? Nor do the authors provide information on the participating pedagogues' pedagogical knowledge in relation to preschool mathematics. On page 81 it is stated: "Since diaper changing is a routine situation in every Swedish preschool with toddlers; no special kind of preschool was needed for this study. Initially, a letter of enquiry was sent to the preschools in two different geographic regions, nine preschools in total. One region was located in a large city and the other in a small town. Sometimes it is not possible to provide a complete description of the aim of a study, since that would likely cause biased results (Bryman 2011); thus, in this study, the letter of enquiry did not convey any information about the special interest in mathematics but requested permission to study communication in everyday care situations. (...) Five preschools responded to the letter of enquiry, and a second letter was sent to the twenty-one employees at these five preschools. This letter, like the first one, did not include any information about our special interest in mathematics. Nineteen of the approached employees accepted the invitation to participate in the study; all the respondents were female. Eight of them were preschool teachers, seven were childminders, and four had been educated in other fields. In the results, all are referred to as pedagogues because the results do not relate to their education. Eleven respondents worked in the urban area, and the other eight worked in the rural region."
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

Yes and no. In order to examine how the cultural activity of mathematics was integrated during ordinary diaper changes, the researchers conducted a total of 52 non-participant observation sessions using sound recordings in the nursery (see Table 1, p. 82). As such, the researchers were not present during the diaper change. Further, it is stated that "Sometimes only one pedagogue and one child were in the nursery during these observations, but most often (based on the routines at these preschools) several children and at least two pedagogues were present. Thus, several diaper changes are included in most of the observation sessions. In total, approximately 300 diaper changes were conducted during the

observations." In order to investigate the mathematical potential in relation to diaper changing, as described by the pedagogues, "a web-based questionnaire was electronically distributed to the respondents. (...) The questionnaire comprised general questions about communication and diaper changes, general questions about mathematics in everyday routines, and specific questions about potential mathematics learning during diaper changes. The study's special interest in mathematics thus became apparent to respondents. The purpose with using a web-based questionnaire was not to keep the respondents anonymous but to make the administration manageable. (...) The questionnaire used in this study consisted of two background questions, twelve closed-ended questions and prompts, and one open-ended question in response to which respondents could write "other things they wanted to make the researchers aware of in relation to diaper changes." In three of the closed-ended questions, several answers could be chosen. In all of the closed-ended questions it was possible for the respondents to supply their own answers and/or to provide additional comments. (...) all respondents answered all the questions on the questionnaire." (p. 82-83). Nevertheless, examples of questions from the questionnaire or an appendix with the entire questionnaire would have been desired.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - No, please justify assessment

Reviewer 2: There is limited information about data analysis. It is stated that the researchers conducted a structured observation analysis of the collected observations, using an observation sheet (see Table 2, p. 82) developed from an a priori analysis (Blom 2005) exploring which mathematical concepts it is possible to communicate during a diaper change. However, the study lacks a thorough description of the observation sheet used, and thus it is rather unclear how the observational data is coded and how quotes are selected from the data material. Moreover, the process of analysis is only briefly described: "During the analysis, two of the authors listened to each recording in its entirety several times. When mathematical content was heard, this was documented in the corresponding column on the observation sheet." (p. 82). Finally, the authors do not describe in any detail how the survey data was analysed. Reviewer 1: I agree with your comments/evaluation. I am wondering a bit how much could be expected? They refer to the background of the observation scheme. Any way it is a pity that the authors do not provide any information about how they used the potential of two readers/analysts (triangulation?)!
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment

Yes and no. The study provides no or sparse information on sample and on how data was analysed.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment

- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The authors do not give the reader much insight into the collected data or how the data was analysed. Therefore, it is difficult to rule out selective reporting bias.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical issues are not discussed by the authors, however it is stated that: "The study was made in line with the ethical rules and guidelines provided by the Swedish Research Council (2002). Parents were informed about the study in a letter that explained the non-participant observations and emphasised the study's focus on the pedagogues rather than the children. In line with the ethical rules and guidelines, all names used in illustrating quotations have been changed in the article. (...) Further the respondents had the possibility to withdraw their approval for the study at any time." (p. 81)

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that a questionnaire survey and an observation study is sufficient enough for addressing the aims of the study. However, the sample size is relatively small.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. Triangulation across data sources (observations and questionnaires). However, the questionnaire could have been described in greater detail. For instance, which questions were included in the questionnaire? It is rather difficult to determine if the questionnaire had valid questions when we do not know the questions asked.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
It is assessed that the transparency related to data analysis procedures is not sufficient. The process of analysing the observational data is only briefly described (p. 82), and the study lacks a thorough description of the observation

sheet used for the analysis. In the questionnaire, the use of both fixed questions with defined reply categories given in advance and open questions is regarded a plus, seeing that the open questions may capture the relevant thoughts that the respondents have regarding relations that are not captured in the fixed questions in the questionnaire. However, seeing that the study lacks information on how the survey data was analysed, the validity of results such as "there was a positive correlation between communications characterised by mutuality and abundant mathematical content" (p. 84) and "the mathematical potential apparent in the diaper changes differed significantly" (p. 85) is questionable. As such, the theoretical framework for analysis is not described, nor is the methods and procedures of analysis that generate the presented results described or discussed. In other words, the findings and conclusions of the study are not well accounted for, and the overall trustworthiness of the analysis does not seem to be good.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The questionnaire consisted of both fixed questions and an open question where respondents were given the opportunity to develop their ideas about what had been covered in the questionnaire. This strengthens the trustworthiness and rules out some of the potential bias when using questionnaires. Still, the uncertainty about how the survey data was analysed is somewhat problematic and, therefore, it is difficult to rule out all potential bias.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to other groups with the similar characteristics
On page 80 the authors state that " (...) the results presented in this article are not limited to Swedish conditions (...)" . I read this as a statement of the study seeking to generalize its' findings to other groups with similar characteristics, i.e. preschools outside of Sweden.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The presentation (p. 83) and discussion (p. 85) of the results is closely related to the aim of the study and based on the empirical material. If not so much theory driven the results are adequate discussed in light of relevant literature. The findings are also carefully discussed (research arguments). New and relevant knowledge is provided. Reviewer 2: However, it is difficult to be sure about the findings and conclusions of this study because of the non-existing

transparency of the methods and procedures of analysis. With these limitations, the findings and conclusions of the study are not well accounted for, and the overall trustworthiness of the analysis does not seem to be good. Moreover, one could argue that other factors, such as the participating pedagogues' pedagogical knowledge in relation to preschool mathematics, could affect the results of the study. However, this is neither described nor discussed by the authors.

ID 29705476: Pettersen, (2016)

Pettersen G O, Volden M, and Ødegaard E E. 2016. Shared curiosity, technology and mathematics : Exploring transitions between two and three dimensions. In *Understanding digital technologies and young children: An international perspective* , edited by S Garvis, and N Lemon Eds, 59-73. London: Routledge.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 12th of September, 2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
Empirical data about Ida and the cube (excerpt from this study) i also published in another article: Volden, M., Pettersern, G. O., & Ødegaard, E. E. (2014). Ida og Kuben - lekende modus i utforskning av matematikk og nettbrett.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
 - Observation study
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
 - Age 4-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

- Children 4 years
- Children 5 years
- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
 - Age 4-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Pedagogical practices
 - Technology and ICT
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Assessment, evaluation, quality assurance and development
 - Working method/educational method
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The researchers contextualise the study by drawing on the trends towards digital technology as learning tools in kindergarten. They also draw on theoretical perspectives to give an insight in the fundamental idea behind the study and it allows the reader to better understand the aim of the study. There is no information given on research funding.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The aim of the study as well as the relevance of it is presented. The aim is to develop knowledge about children's use of and explorations with tablets with touch screens, particularly in relation to material construction and mathematical understanding and learning.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
The selection of the kindergarten is not accounted for, nor is the sample of children and kindergarten teachers participating in the study. Furthermore there is no description of the kindergarten nor the participants, and the sample criteria or the process of sampling are not accounted for.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
This study is based on a case study approach. The choice of this is shortly argued on p. 62. But the choice of the specific method (video-recording of the created activities) is not argued. On the other hand it is described how the video-recordings were carried out. Data was collected with video of the situation. Two cameras used and explained how they were placed. The video from both cameras was synchronised in Adobe Premiere CS6 and was transcribed using Inqscribe (v.2.2.1) but unclear whether all the video material was transcribed. Furthermore there are descriptions of how the researchers created and planned the activities with the pedagogical staff from the kindergarten. They argue why they have chosen to use the different elements (artefacts, shapes, polydron, folding 2D/3D geometric solids) in the activities and they as well describe them. But they don't discuss why exactly those elements are interesting rather than some else nor if these elements could have some limitations. The activities' content are well described though it is not discussed why the researchers were performing the activities for the children and not the pedagogical staff from the kindergarten. All three researchers were involved in selecting the two cases presented in this study from the empirical data, but not stated how the selection was carried out.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - No, please justify assessment
The researchers describe how the chosen cases from the empirical data will be presented in the analysis but there is no explanation on how these particular cases were selected. Why did they exactly choose these two examples? They do describe the analytical attention. Apart from this, no clear analytical strategy. It is not specified how the cases are analyzed. The researchers have not examined their

own role, potential bias and influence during analysis and selection of data for presentation.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Some parts of the study are transparently reported, others are not. The context and theoretical foundations are e.g. clarified and the aim is clear. The information given on research methods is transparently reported though it is missing some arguments. However, the information given on sampling and analytical procedures is not adequate.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
But they point out that the empirical data about "Ida and the cube" is published in another article. Whether there is access to more empirical data in that article is not stated.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
It is unclear how the selection of the presented empirical data has taken place. Furthermore it is not clarified why the researchers were performing the activities with the children and not the pedagogical staff in the kindergarten. Would the children have reacted differently with the pedagogical staff performing the activities? There is no clear strategy for the analysis.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
This study was approved by the Norwegian Social Science Data Services. However, it is unclear whether the names of the children participating are anonymized.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design per se seems appropriate in relation to the aim of this study. And the reason for the research design is justified. But it is not argued why exactly the two selected cases were interesting for presentation nor how the selection was carried out.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. First of all, the data collection is sufficiently described including the

elements of the activities. However, the researchers do not explain how the presented empirical data has been chosen, just that all three researchers participated in the selection process. Furthermore, there is no information on how the sample was identified and recruited nor reflections on the size of the sample.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
The researchers have given information about the analytical attentions and how the empirical data will be presented in the analysis. Apart from that, there is no clear strategy for the analysis presented. As stated previously, it is not clarified how the selection of the presented empirical data has taken place. What are the arguments of the presented data being more interesting than the other empirical data collected? Sufficient data are presented to support the findings in the analysis, though it is unclear and not examined what the researchers' role and influence were during the data and where the original data is stored, why the trustworthiness of the analysis can be questionable.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The context in this study is sufficiently described why the explanations and descriptions for the findings of this study are reasonable. Furthermore the researchers reflect on other possible explanations/findings during their analysis (see example p. 68). But again they do not give information about the selection process of the presented empirical data nor the sampling process which potentially could have lead to other findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
No such statement or reflections presented.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. Sufficient data/descriptions are presented to support the findings in the analysis. Furthermore the researchers reflect on alternative explanations of the findings in the analysis. Reviewer 2: No. The reviewer does not have arguments to differ over findings and conclusions per se, but since the study lacks an adequate description of the sampling procedure/criteria and the analysis process, it is difficult to establish a high trustworthiness of the study.

ID 31576466: Plotnikof (2016)

Plotnikof, Mie. 2016. "Letting go of Managing? Struggles over Managerial Roles in Collaborative Governance.". *Nordic journal of working life studies* 6(S1):109-128.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on August 28th, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
*The data used in this article stem from a larger research project on quality management innovation (QMI), in which two municipalities worked in a partnership with the Danish Union of Early Childhood and Youth Educators (BUPL). The author has published the following references in connection with the above project: A dissertation from 2015, entitled "Challenges of Collaborative Governance: An Organizational Discourse Study of Public Managers' Struggles with Collaboration in the Daycare Area". This dissertation includes three articles: 1) "Studying complexities of collaboration: Multimodality in organizational discourse ethnography". Book chapter accepted for an anthology on organizational ethnography, published by Routledge (2016). 2) "Letting go of managing? Struggling over managerial roles in collaborative governance". *Nordic Journal of Working Life Studies* 2016, Vol. 6, No. 1, pp. 1-19. This is the present article. 3) "Negotiating collaborative governance designs: a discursive approach". *The Innovation Journal: The Public Sector Innovation Journal* 2015, Vol. 20, No. 3, pp. 1-22. In addition to the references listed above, this study must*

be linked to the following reference included in the NB-ECEC database: Hvid & Plotnikof (2012): "Nye Muligheder for Samarbejde i Styling og Organisering af Dagtilbud". It must also be linked to the other article by Plotnikof included in this years' review: Changing Market-Values? Tensions of Contradicting Public Management Discourses - A Case From the Danish Daycare Sector. In the list of references, the author finally lists the following reference: Hviid & Plotnikof (2013): "Styringslaboratoriet: Explorativt samarbejde om "meningsfulde" organisatoriske forandringer - Erindringsværkstedet som eksempel" (Governance laboratories: Exploratory collaboration on "meaningful" organizational changes - the case of a memory workshop). Økonomistyring og Informatik 28(4):387-420. There is a lack of clarity in the study around these secondary references and around the fact that this article is part of the author's dissertation. There may be more references linked to the project that are not mentioned here.

- A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction

- A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description
The role of the manager during collaborative governance practices in cases from the Danish daycare area.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
Nothing is declared in this article, however the author states the following in the other article included in this review: "The author declares that parts of the data-collection received funding from an independent research grant from the Danish Union of Early Childhood and Youth Educators (BUPL). However, the grant included full research independency and thus there is no conflict of interests related to this publication."

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - One-to-one interview
 - Focus group interview
 - Report of diary (field notes)
 - Sound recording
 - Video
 - Other (please specify)
Photos and documents (organizational documents such as participant-written reflection notes, e-mails etc.), see page 115.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Governance: Municipal
Public managers (department heads and consultants)
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
 - No information provided on the age of the children
In one empirical excerpt, the children are around 4-5 years of age, but it is not clear whether these are the only children represented in the data set. Elsewhere in the article, the author uses the broad term "children from daycare centres". It is not specified exactly how these children are part of the collaborative governance process, but there seems to be children present on different occasions, e.g. when workshops are held, as in the situation presented in the excerpt. In this excerpt, the

focus is however not on the children, but rather on the reactions of the adults. Thus, the role of children as informants is somewhat indirect.

- Parent
- Governance: Municipal
- Politician
- Trade union
The municipalities were in a partnership with The Danish Union of Early Childhood and Youth Educators (BUPL), see page 114.
- A15: In cases where children inform the study, which age groups are included?
 - Other, please specify
See A14.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - Evaluation and assessment
 - Curriculum
 - Policy
 - Day-care quality
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Assessment, evaluation, quality assurance and development
 - Working with control documents
 - Other, please specify
Management on the municipal level
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in an economic and political perspective

- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment

The researcher discusses the contribution of the study to existing management literature and theory. Relevant research findings and theoretical discussions are clearly and poignantly presented, giving the reader a good understanding of the research field within which this study is located. Important theoretical concepts are adequately clarified. The researcher also gives information on the policy background and the structure of daycare management in Denmark, including reflections on management tendencies (NPM and NPG), quality management policies, education plans etc. Finally, the researcher argues well for the relevance of the study and for its' ability to shed light on issues previously under-explored in the literature (these issues being the complexity of new management roles). See pages 110+112. One note of criticism must however also be mentioned here. As stated in A3, the author does not adequately clarify the position of this article as part of her own doctoral thesis. She does not list all relevant articles from the project in her list of references. Furthermore, she does not address funding sources, however in the other article by the same author included in this years' review, BUPL is listed as a funding source.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment

The goal of the research is both clear and justified, with the primary purpose of the study being to analyze managers' positioning during collaborative governance practices within the Danish daycare area. The following question is asked on page 110: How are public managers positioned to manage collaborative governance and with which challenges? Thus, the study explores the different roles taken by public managers within the daycare field. The researcher argues for the relevance of the study by pointing to ways in which the study contributes to the research field and adds new insight into under-explored phenomena and processes.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment

Yes and no. The sample for the study is described, but some uncertainties remain. On page 114, the researcher justifies the selection of municipalities in the fact that the daycare departments in these two municipalities formed a partnership with the Danish Union of Early Childhood and Youth Educators (BUPL) to develop new forms of quality management through collaborative governance. Thus, the selection criteria for the overall sample are presented, although the role of the union is not further specified. The structure of the daycare departments in the

municipalities is described, although it is done in a way in which it is not entirely clear what policy level is referred to - are the departments based on the municipal level or on the "klynge"-level? Overall, the data set covers an impressive amount of different data sources and informants, and it is hard as a reader to gain a precise overview of the whole data collection process and of the sample in its' entirety. It seems that four daycare centers were involved, but their selection and exact participation is not specified. The same goes for the inclusion of parents and children as informants. The exact number of e.g. interviews, workshops etc. is not clarified either. These uncertainties are likely due to this article drawing on data from a larger, overarching project. However, more could be done to give a precise description of the data used for this particular analysis. The collected data material includes field notes, photographs, video- and sound recordings, interviews and focus groups and various organizational documents.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- Yes, please justify assessment

Yes and no. As stated in C3, the data set used in this study covers an array of different data sources and informants, making it difficult to gain a precise overview of the data collection process. On pages 114-116, the researcher presents information on methodological issues and the overall research process. Here, the research process is described as lasting four years and entailing the use of "varying ethnographic methods", including field notes, photos, video and audio-recording from participant observations in collaborative governance practices, single and group interviews and organizational documents. The exact number of participants and the nature of e.g. participants observations and group interviews is not specified (interviews are just described as "unstructured"). It is not clear how e.g. children and parents were included as informants - was it purely through observations, and in that case, where and how? The researcher states on page 115 that she produced an event history database showing when and where different kinds of data were collected. This sounds like a meaningful way to keep track of such large amounts of empirical data, and it would have been beneficial to attach it or otherwise present it in the article. As mentioned in C3, the uncertainties described here are likely due to this article drawing on data from a larger, overarching project. It is understandable that the author does not provide lengthy descriptions given the article format, however more could have been done to give a clearer presentation of the data and methods used.

- C5: Is there an adequate description of data analysis? (only one coding allowed)

- Yes, please justify assessment

The strategy used for analyzing the vast empirical material is presented on pages 115 and 116. Here, the researcher describes an analytical process characterized

by multiple movements and re-iterations, including both open and closed analyses of themes and patterns in the data. In these descriptions, the researcher provides the reader with an overall sense of the analytical process, although not making it entirely concrete. The theoretical foundations for the analysis are made clear in the researchers' reflections on other research and central management concepts found in the beginning of the article. The theoretical foundations are reflected all through the analysis. The researcher does not reflect on her own role within the field. The empirical examples selected are illustrative of the points being made, however their selection from the overall data set is not specified.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is reported with adequate transparency, although with some uncertainties pertaining to the exact research process (primarily regarding sampling and the use of specific methods for data collection). Also, the position of this article as part of the authors' dissertation and as linked to a number of other research articles is not clarified, nor is the funding for the project.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement is made (nor is it the norm).
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The researcher answers the research question presented fully, and the presentation given is balanced and focused. Overall, the study shows good coherency.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
As such, there are no specific ethical concerns to address. However, the researcher does not provide any details or reflections on research ethics (no mention of e.g. informed consent or anonymity). The names used for individual informants are supposedly not their real names. Although the municipalities are not named in the article, the overall information given on the collaborative governance project, including the partnership with BUPL, makes it easy to trace the participating municipalities and daycare departments. This is not necessarily problematic since the findings are not of a sensitive nature, however the subject of ethics should always be addressed, particularly when performing qualitative research involving individual participants.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)

- Yes, please justify assessment
The choice of a qualitative case study design, including an array of ethnographic data collection methods, seems appropriate for investigating issues of role positioning and discourse. The nature of the collaborative governance project and the activities herein affects and justifies many of the data collection methods used, and the overall relevance of this particular case is well established by the researcher. The author should however have addressed the purpose of using multiple data sources and the potential for triangulation.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Overall, this reviewer has no specific concerns as to the validity and reliability of the data collection methods used. However, there is a lack of transparency as to the exact use of different data sources as well as to the inclusion of the various informant groups. The data set includes an impressive array of data collection methods, which in itself offers good opportunities for cross-validating research findings. The author states on page 115 that the design "aimed at producing rich data", but apart from this, there are no direct reflections on triangulation. As stated previously, the nature of the collaborative governance project and the activities herein justifies many of the data collection methods used, however the author should have presented more direct reflections on the purpose of and potential benefits to using multiple data collection methods and informant groups. The author states on page 115 that "The methods used for data collection were critically considered during data analysis, and along the way analytical points were discussed with participants to allow them to nuance these". Making critical considerations on the data collection is excellent in terms of reliability and validity, however it should be further clarified how this was done.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
As previously stated, an analytical strategy is provided, which is not entirely clear, but which does however provide the reader with a sense of the analytical process and its' back-and-forth movements. The author describes using both open and closed analysis and letting preliminary findings guide more systematic thematic analyses. Several critical iterations are used. It is also stated on page 115 that informant validation was used: "... along the way analytical points were discussed with participants to allow them to nuance these". Overall, the analysis reflects a consciousness around the complexity of the phenomena under study. Processes are described as inter-twined and the author is careful to not present

different phenomena as sharply divided or clear-cut; on the contrary, the analysis is written in a way which reflects the duality and complexity of managerial roles. This is seen e.g. on page 116, where the author presents a table of the general analytical findings. Here, she carefully notes that "The three part elucidate interconnected aspects of the positioning, and the divisions are to mediate rather than to represent demarcated processes.". The use of this table provides the reader with a good sense of the development in managerial roles. During the analysis, empirical examples are meaningfully used to illustrate central points. The selection of these examples from the overall data set is however not entirely clear. Furthermore, the author does not critically examine her own role within the field and the potential influence that the presence of a researcher might have on the participants.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
An ethnographic case study such as this is not intended to rule out sources of bias or alternative explanations. Its' purpose is to search for insight into complex, situated phenomena. The researcher thus states on page 123 that "Although these findings are case-specific, they contribute to the literature on the new managerial role". The value of this piece of research is thus defined by its' contribution to management theory and not by its' generalizability or ability to eliminate biases. That being said, the researcher does not adequately consider the potential biases that may be at play in this particular research process.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
On page 123, the researcher states the following: "Although these findings are case-specific, they contribute to the literature on the new managerial role". Thus, the purpose of this research is to contribute theoretical insights to the research field.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings of the study are presented in adequate length and with empirical backing that serves to illustrate the points made. The analysis and the conclusions drawn from it reflect theoretical discussions, and the author relates her findings to other research within the field. The study is thus theory driven, and the author's use of theoretical concepts reflects advanced theoretical and analytical abilities. The author adequately discusses the findings and presents

them in a balanced way where social phenomena are not over-simplified, but rather reflected in all their complexity. There is furthermore a good coherence between the different parts of the study, from the overall purpose and research question to the analysis and final conclusions. Reviewer 2: This is a coherent study with generally good transparency. The data analyses are well performed and related to the discussion and conclusions. This forms an image of good evidence and it is easy to follow the steps in the research process which leads to the contributions of knowledge given from the study.

ID 27412445: Plotnikof (2016)

Plotnikof Mie. 2016. "Changing Market-Values? Tensions of Contradicting Public Management Discourses - A Case From the Danish Daycare Sector". *International Journal of Public Sector Management* 29(7):659-674.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 10th of July, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
*The data used in this article seem to stem from a larger research project on quality management innovation (QMI), in which two municipalities worked in a partnership with the Danish Union of Early Childhood and Youth Educators (BUPL). This, however, is not openly stated by the author. In addition to the present article, the author has published the following references in connection with the project: A dissertation from 2015, entitled "Challenges of Collaborative Governance: An Organizational Discourse Study of Public Managers' Struggles with Collaboration in the Daycare Area". This dissertation includes three articles: 1) "Studying complexities of collaboration: Multimodality in organizational discourse ethnography". Book chapter accepted for an anthology on organizational ethnography, published by Routledge (2016). 2) "Letting go of managing? Struggling over managerial roles in collaborative governance". *Nordic Journal of Working Life Studies* 2016, Vol. 6, No. 1, pp. 1-19. 3) "Negotiating collaborative governance designs: a discursive approach". *The Innovation Journal: The Public Sector Innovation Journal* 2015, Vol. 20, No. 3,*

pp. 1-22. There may be more references linked to the project that are not mentioned here. In addition to the references listed above, this study must be linked to the following reference included in the NB-ECEC database: Hvid & Plotnikof (2012): "Nye Muligheder for Samarbejde i Styring og Organisering af Dagtilbud". There is a lack of clarity in the study around these secondary references and around the fact that the data stem from a larger project which includes the author's dissertation.

- A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction

- A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description
An investigation of discursive concepts and tensions between value-laden practices within NPM and NPG, as they unfold in the Danish day care sector.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Union funding, please state the name of the funder
The following statement is made by the author: "The author declares that parts of the data-collection received funding from an independent research grant from the Danish Union of Early Childhood and Youth Educators (BUPL). However, the grant included full research independency and thus there is no conflict of interests related to this publication."

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Case study

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

- One-to-one interview
- Focus group interview
- Report of diary (field notes)
- Collection of data from day-care (minutes of meeting, calendar etc.)
- Sound recording
- Video
- Other (please specify)
Photographs, articles, newsletters, organizational charts, quality reports and websites.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
 - Governance: Municipal
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
 - Educational staff: Practitioner
 - No information provided on the age of the children
 - Parent
 - Governance: Municipal
 - Politician

- Trade union
- A15: In cases where children inform the study, which age groups are included?
 - Other, please specify
Ages of children not specified
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - Evaluation and assessment
 - Curriculum
 - Policy
 - Day-care quality
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Assessment, evaluation, quality assurance and development
 - Working with control documents
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Overall, the context of the study is adequately described. The author reports on how the study was funded and provides information on the time of data collection (2010-2014). She discusses the contribution of the study to the existing research field and draws on previous studies on NPM and NPG. These theoretical management concepts are well described, as well as the academic discussions surrounding them. The Danish day care sector is presented in terms of its' management and curricula (the 2004 act on pedagogical curricula). This includes descriptions of management tendencies within the sector (NPM, standardization

etc.) as well as alternating or new tendencies such as collaborative governance. Thus, the study is related to current policy contexts. The use of a discursive perspective and what it entails is described in good detail and clarity. There is some confusion as to the use of the terms "local government" and "municipality". Also, the terms "day care departments" (p. 667) and "day care centers" (p. 665) are unclear. These terms and their use lead to confusion as to what policy level is referred to when? It seems that these terms are the same or overlapping, but they are not used in a consistent manner. In Denmark, we have several day care management levels, from managers of individual institutions (pædagogiske ledere) to managers of groups of institutions (klyngeledere), and further on to municipal managers (kommunal forvaltning) and finally ministerial/government levels. Therefore, a clear and accurate specification of management terms and levels is crucial.

- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The purpose of the study and the importance of carrying out this research are established. No clear cut research questions are provided, however the aim of the research is clearly and repeatedly stated as a wish to investigate discursive concepts and tensions between value-laden practices within NPM and NPG, as they unfold in the Danish day care sector.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The process surrounding the collaborative innovation partnership, which is the case used, is adequately described and contextualised (e.g. on p. 665). The timeframe for the project is reported. The reason for the selection of this particular case is given on p. 665, where the following statement is made: "This case was selected because the local governments offered free research access to both daycare centers involved in the collaborative initiatives and to the managerial meetings and practices concerning their development of these initiatives. Furthermore, local unions supported the initiatives by joining the partnership, making the case interesting as it gathered stakeholders from government, staff, unions and citizens." It is not clarified how the four day care centres were chosen (see p.665).
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
On the positive side, the author reflects on and justifies the use of a discursive perspective. Furthermore, the extensive array of data collection methods used is listed on p. 665. On the negative side, no in-depth descriptions of the individual

methods used are provided. There is e.g. no information provided on the construction of interview guides in the case of individual and group interviews. The information provided is merely a listing, not a description per se. Furthermore, the author, surprisingly, does not address saturation of data or efforts to triangulate different data sources. Finally, it is not entirely clear whether this is an action research project. The methods used (e.g. labs and workshops) may indicate that this is the case, but it may also be that the author is merely observing the project. This should have been clarified by the author.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - No, please justify assessment
It is not entirely clear how the various data sources are used. However, the analytical process is presented on p. 666, including the use of a timeline and thematic coding. Even though the author describes this process and mentions the use of reiterative analytical movements etc., it is still not clear how the analysis actually unfolded. How e.g. were themes and quotes selected? It seems that the analytical strategy becomes too general. In a sense, the analytical strategy itself becomes analytical, in that the author presents findings, but does not provide adequate processual/methodological information about how the analysis was actually carried out and why. No comments are made on triangulation and the possible strengths in using multiple data sources, which seems surprising, given the large amount of data. The author does not reflect on the credibility of her findings, nor on biases or her own role within the field.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. As reflected in the previous sections, some parts of the study are transparently reported, whereas others are not. When considering the format of a journal article, it is not reasonable to expect long descriptions of methodology and analytical strategies. However, these aspects should have been described in more clarity in order to allow the reader a proper sense of the research process and a chance to assess the quality of the study.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement is made (nor is it the norm in a journal article).
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
This is somewhat difficult to assess given the lack of clarity in parts of the study. However, it seems that the overall purpose of the study is addressed and followed throughout.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
There is no mention of research ethics, apart from the statement on no conflicts of interest made in the beginning of the article. It is thus not clear how the participants were informed, nor how or if they were included as co-researchers (if this is some kind of action research format). Thus, the attempt to secure research ethics cannot be deemed adequate as it is described in this article.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The author justifies the use of a discursive approach and argues for the relevance of doing this particular study. The use of a range of qualitative methods as "texts" is relevant when seeking to illuminate discourses and values. The choice of using multiple data sources and their inter-play is however not adequately addressed.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
As mentioned previously, the data collection methods are listed, but not adequately described and reflected on. It is not clear how e.g. the interviews were carried out or what was the focus of the participant observations. Furthermore, it is not clear whether this is an action research project. The relationship between researcher and participants is not reflected on, and there are no comments made on the researcher's own role and the possibility of biases. Was the researcher merely an observer or was she a participant in some form?
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
There is a description of the analytical process, including the use of a timeline, thematic coding, in-depth analysis and reiterative movements. However, this description is very general and does not adequately provide a sense of how the actual process took place. It is not clear how the data presented were selected from the overall sample. The use of multiple data sources and triangulation is not addressed. The role of the researcher is not reflected on.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is not the purpose of a qualitative case study to rule out sources of bias or

alternative explanations. The author should however have done more to address potential biases and limitations to the study, and her role as a researcher needs more clarification. It is not possible to judge whether e.g. researcher or participant biases may be present.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
The author addresses the generalizability of the study in good length on pages 670-671, stating that case study findings such as these are not transferable to all public sector contexts, but are of theoretical value and can illuminate further research. Thus, the role of the study is to add insight.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings and conclusions are in sync with the aims of the research and reflect theoretical discussions. The author does not make any unreasonable claims as to the generalizability of the findings. The credibility of the analysis is not addressed by the author, nor is the possibility of biases or alternative explanations. Reviewer 2: The study is highly consistent with well defined research questions, fairly transparent and results grounded in analysis of data (see for example table 1). Results and conclusions are clearly discussed in relation to theory and results from other studies in the field.

ID 27434015: Puroila, (2016)

Puroila AM, Johansson E, and Estola E et al. 2016. "Interpreting Values in the Daily Practices of Nordic Preschools: A Cross-Cultural Analysis". *International Journal of Early Childhood* 48:141–159.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
August 15, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
It is stated that the present study is part of a larger project, including national action research projects focusing on values education in preschools in five Nordic countries—Denmark, Finland, Iceland, Norway and Sweden.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The aim of this study is to deepen cross-cultural understanding of how educators interpret early childhood practices from the perspective of values in Nordic

preschools. At the core of this study is a dressing episode observed in a Swedish preschool. The educators read, interpreted and discussed the description of the dressing episode, and the study addresses both the content and the process of educators' interpretations. The research questions include: How do values emerge in educators' interpretations? What is the interpretive process like, especially in the context of cross-cultural research? (p. 144)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Ministry/government/local government, please state the name of the funder
This study was funded by NordForsk (Values education in Nordic preschools—Basis of education for tomorrow; project number 53581) and the Academy of Finland (From exclusion to belonging: Developing narrative practices in day care centres and schools; project number 264370). (p. 157)
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Denmark
 - Norway
 - Sweden
 - Other OECD countries, please specify
Finland and Iceland.
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Focus group interview
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)

- Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Equal opportunity
 - Pedagogical practices
 - Other, please specify
The main topic of the present study is values education in Nordic preschools.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Basic values and/or ethics
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Inclusion/exclusion
 - Social system
 - B4: The institution in society (multiple coding allowed)
 - The institution in a historical and cultural perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The theoretical frame of the study is described. The ECEC context of the countries where the data is collected is briefly mentioned (See p. 143-144).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of this study is to deepen cross-cultural understanding of how educators interpret early childhood practices from the perspective of values in Nordic preschools. At the core of this study is a dressing episode observed in a Swedish preschool. The educators read, interpreted and discussed the description of the dressing episode, and the study addresses both the content and the process of educators' interpretations. The research questions include: How do values

emerge in educators' interpretations? What is the interpretive process like, especially in the context of cross-cultural research? (p. 144)

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Overall, no. There is limited information about sample and sampling strategy. It is stated that the present study is part of a larger project, including national action research projects focusing on values education in preschools in five Nordic countries—Denmark, Finland, Iceland, Norway and Sweden. Further it is stated that ten group interviews, two in each Nordic country, were conducted, and that the groups varied both in size and in the educational background of the educators; some groups contained only teachers, while teachers and trained nurses participated in other group interviews. From Table 1 (p. 146) it appears that the group sizes varied from 2-7 educators and 1-3 researchers, and that 6 groups consisted of both teachers and trained nurses while the remaining groups consisted of only teachers. However, the study lacks a thorough description of the participating preschools, teachers and trained nurses. Furthermore, the authors do not provide any information on their sampling strategy, except from the criteria "that the dressing episode had inspired the educators into multiple considerations of how they understood it." (p. 146).
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The study lacks detailed information on how data was collected. On page 146 it is stated that "the study employs two-level textual material. At the core of the study is a dressing episode observed and transcribed by Johansson (2003) in a Swedish preschool (Appendix 1). This episode was used at the beginning of the national action research projects to inspire discussions about values in the participating preschools in all Nordic countries. In Iceland, Norway and Finland, the episode was translated into the educators' mother tongue, while the Swedish text was used in the other countries. Group interviews were organized with the educators and researchers to discuss the dressing episode, and the Nordic research group agreed on the procedures for the group interviews. Rather than posing a rigorous set of questions, the researchers agreed to be flexible to follow the educators' reasoning, to extend and exemplify their interpretations and to reflect on not only the dressing episode but also their own experiences of values education. The educators were asked to read through the transcription of the episode." However, the researchers' role in the group interviews/discussions is not clearly defined. It is merely stated the researchers' role was significant, although their level of participation varied in the group interviews. The authors

acknowledge that it is arguable that the researchers were not neutral in the interpretation process, and that the researchers influenced this process merely through their presence (see p. 149).

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. It is assessed that the theoretical frame of the study and the analytical procedures are sufficiently described, considering that this is a short journal article. It is stated that "The analysis was based on an inductive, data-driven process; that is, moving from local to more general perspectives (see Pouliot 2007). In practice, the analysis began from the educators' experience-near meanings at the local and national levels and proceeded towards a cross-national Nordic perspective. In order to minimize the risks of ethnocentrism involved in cross-cultural research (e.g. Osborn 2004), the research material was analysed both nationally and cross-nationally. First, researchers analysed material from their own country by answering two analytical questions: What do the educators talk about? From what perspectives do they interpret the dressing situation? Second, the material was interpreted cross-nationally using the same analytical questions. Third, the national and cross-national analyses were drawn together by the first author. In this phase, the researchers' interpretations were read in parallel while looking for similarities and differences. On the one hand, it appeared that the national and cross-national interpretations contained many similarities, thus supporting each other and increasing the credibility of the findings. On the other hand, it emerged that the researchers had employed three different perspectives when analysing and interpreting the material: (1) the content of the group interviews (what was talked about); (2) the educators' perspective-taking during the group interviews (from whose horizon the dressing situation was addressed); and (3) the interpretation process per se (how the educators constructed their interpretations). Since all three perspectives were relevant for the research questions, the research material was re-read and re-analysed from these perspectives. Finally, the findings were discussed and elaborated within the Nordic research team." (p. 147)
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. Most parts of the study are reported with sufficient transparency, i.e. the theoretical framework and procedures of the analysis. Some methodological aspects of the study are however not adequately described, i.e. the participants of the study and the researchers' role in the group interviews / discussions are not appropriately accounted for. Moreover, the authors do not discuss ethical considerations of the study in any way.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment

- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors describe the data analysis process, and how the emerging categories of results were identified and interpreted both nationally and cross-nationally.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - Yes, please justify assessment
Perhaps. It is not stated whether consent of the participating educators was sought before the start of the study, nor does the authors further discuss ethical aspects of the study.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. The study is a qualitative study exploring how practitioners interpreted educational practices from the perspective of values in Nordic preschools. Thus, the aim of the study was explorative and the research methods were explorative. Therefore, focus group discussions seem appropriate.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. More information on the participating practitioners and the sampling strategy would have been desired. Also, the authors could have reflected more upon the methodological limitations of the data collection and the researchers' role in the group interviews/discussions. This study being part of a larger project with several (six) researchers, some of who were not part of this particular part of the study, is not elaborated upon. This should have been done, and more details about the data collection process and if all the six researchers were part of this should have been provided to heighten the transparency of the study.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The use of theories concerning values education, together with the concept of horizons, is described and accounted for. The authors also describe the strategy and process of their analysis. Previous research and excerpts from the interview

transcriptions are used to illustrate the authors' interpretations, which is regarded a plus.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is difficult to rule out bias in studies of this character. The authors could with advantage have elaborated on the limitations of the data source or presented alternative explanations for their findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
On page 154 the authors state: "Although the study was conducted in the context of Nordic countries, it has implications and raises questions that are relevant internationally, beyond the countries involved."
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The findings are explicit and the conclusion is related to the original research question and reflects theoretical discussions. However, the title of the article is a little misleading. The analysis is more cross-national than cross-cultural, and the article seem to lack (a) a discussion of the strengths and weaknesses of conducting national oriented research and (b) the concept cross-cultural research.

ID 27392527: Quennerstedt (2016)

Quennerstedt Ann. 2016. "Young children's enactments of human rights in early childhood education". *International Journal of Early Years Education* 24(1):5-18.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
August 9, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The present study aims to explore the ways in which human rights become part of and affect young children's everyday practices in early childhood education and, more particularly, how very young children enact their human rights in the preschool setting. The focus is accordingly on the children and their actions, and

thus the children's actions provide first-hand information about how they relate to the human rights norms guiding these practices. The specific research question is: How do children aged 1–3 enact their human rights in the preschool setting? (p. 5-6)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
At page 16 it is stated that the present study was supported by the Swedish Research Council.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
Observations of the everyday practices of a group of children between the ages of 1 and 3 years.
 - Report of diary (field notes)
Observation notes.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 1 year
 - Children 2 years
 - Children 3 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Children aged between 1 and 3 years.
- A14: Who informs the study? (multiple coding allowed)
 - Children 1 year

- Children 2 years
- Children 3 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Children aged between 1 and 3 years.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Perspective of the child
The study aims to represent children's perspectives rather than an adult perspective (see p. 8).
 - Other, please specify
The main topic of the study is young children's human rights at the preschool setting, i.e. how young children enact their human rights in the preschool.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Basic values and/or ethics
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Social system
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in a historical and cultural perspective
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The study is informed by previous research on children's rights in ECEC (p. 6-7) together with human rights theory and childhood sociology (p. 7-8).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The present study aims to explore the ways in which human rights become part of and affect young children's everyday practices in early childhood education and, more particularly, how very young children enact their human rights in the preschool setting. The focus is accordingly on the children and their actions, and thus the children's actions provide first-hand information about how they relate to the human rights norms guiding these practices. The specific research question is: How do children aged 1–3 enact their human rights in the preschool setting? (p. 5-6)
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Overall, no. It is merely stated that "18 children in a Swedish preschool group were observed in everyday preschool practice for a total of three weeks (60 hours of observation time). The youngest child was 12 months old and the oldest 2 years and 9 months." (p. 9). The author provides no further information on the studied preschool or the participating children. Nor does she provide any information on the sampling strategy.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The methodological approach of the study is described at page 8-9, and it is stated that the researcher observed participating children in everyday preschool practice for a total of three weeks (60 hours of observation time). Further it is stated that "A wide variety of common situations were observed and included children's free play indoors and outdoors, teacher-led assemblies or activities indoors and outdoors, excursions outside the preschool area and mealtimes. The researcher alternated between observing passively with no interaction with the children and actively observing with interaction, for example by taking part in a play situation, assisting the children with something or engaging in conversation. The observations focused on situations and interactions where the children's actions could be reflected against a human right. The observation notes were transcribed and situations displaying aspects of rights were identified." (p. 9). However, in the results section the researcher refers to results from interviews conducted with the teachers (see p. 14), but these interviews are not described in the data collection section at page 9.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. It is stated that the data analysis was done in three steps; first (1) the rights theoretical framework was applied to the action and context in order to

articulate which human right or aspect of a human right stood out in the situation. The theoretical framework is described at page 7-8. According to the researcher, a situation can involve more than one right and be interpreted from different rights-related angles. However, in the study it was often possible to identify one right or aspect of a right as the principal or most visible right in a situation. The next step (2) was to formulate what function the children's actions had in relation to this right. The final analytical step (3) was to articulate the rights-holder positions that were enacted through the children's actions (p. 9-10). Table 2 at page 10 presents the analysis chart (an example situation is provided). The description of the data analysis process could have been better, however, and therefore it is not completely evident how the three emerging rights areas (that is ownership, influence and equal value) were identified. Still, it is assessed that the transparency related to data analysis procedures is sufficient, considering that this is a short journal article.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. It is assessed that the study is reported in sufficient detail concerning the context and aim of the study, the data collection and the analysis of data, but not concerning the sampling procedure and describing the sample.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The description of the data analysis process could have been better, and thus it is not completely evident how the three emerging rights areas (that is ownership, influence and equal value) were identified. However, the author gives the reader some insight into the observation data by using central transcripts to exemplify the main findings.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical considerations are briefly discussed at page 10. Informed consent from parents were retrieved, and as formal consent was not considered possible (because of the children's young age), the researcher instead paid close attention to how the children responded to her presence. If a child signalled unease or did not seem to appreciate the presence of the researcher, the researcher removed herself from the scene. If the children invited the researcher into their play she

joined in when appropriate (see p. 10). However, it is not stated whether the participating children have been anonymised.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The study is a qualitative observation study exploring how children aged 1–3 years enact their human rights in the preschool setting. Thus, the aim of the study was explorative and the research method was explorative. Therefore, observations of the everyday preschool practice (such as free play, mealtimes and teacher-led activities) seem appropriate.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The methodological approach and data collection procedures are described at page 8-9. However, more information on the participating children and the sampling strategy would have been desired.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The use of human rights theory and childhood sociology is well described and accounted for, and excerpts from the observation transcripts are used to illustrate the author's interpretations. However, the author could have described the strategy and process of her analysis in greater detail.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is difficult to rule out bias in studies of this character. The author could with advantage have elaborated on the limitations of the data source or presented alternative explanations for her findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings are explicit and the conclusion is related to the original research question and reflects theoretical discussions. The findings represent new

empirical understanding about the subject in matter. Reviewer 2: The data collection method seem appropriate to explore the research question, however the analysis strategy and process could have been described in greater detail. The results presented are interpreted in-depth and the conclusions made seem sound and relevant.

ID 27392528: Rantala (2016)

Rantala Anna. 2016. "- Snälla du! Kan du sätta dig? : om vägledning i förskolan". , Umeå Universitet.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
June 22, 2017
 - A2: Type of publication (only one coding allowed)
 - Thesis/dissertation
Umeå Universitet
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Swedish
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative

- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - The empirical material consists of video observation.*
 - Video

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner

 - Children 1 year

 - Children 2 years

 - Children 3 years

 - Children 4 years

 - Children 5 years

 - Children 6 years

- A13: In studies with children, which age groups are covered?
 - Age 0-2

 - Age 3-6

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner

- Children 1 year
- Children 2 years
- Children 3 years
- Children 4 years
- Children 5 years
- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Pedagogical practices
 - Other, please specify
The main topic of the present study is on processes of socialization / education (in Swedish: fostran) in preschool.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Basic values and/or ethics
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical frame of the study (see p. 55-69), previous research on how

children are socialized in preschool (see p. 20-36), and the Swedish context in which the study is conducted (see p. 7-19) are described.

- C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
Reviewer 2: The author states that "The overall aim of the thesis is to make a scholarly contribution to deeper understanding of how socialization is performed in the activities of the preschool. Towards that aim, I examine and problematize everyday situations in which children and adults interact in order to uncover how socialization is performed in the preschool, with specific focus on the verbal guidance provided by educators. The questions that will be answered are: • How are communication patterns shaped in situations characterized by socialization? • How are relationship patterns shaped between children and educators in situations characterized by socialization? • What are the educators leading the children towards?" (p. 4-5) It should be mentioned that the aim/research questions obviously have been slightly adjusted or concretized during the process of analysis (see chapter 8). Reviewer 1: It should be mentioned that the aim/research questions obviously have been slightly adjusted or concretized during the process of analysis. /Explicit focus on supervision [vegledning]? If I understood right what she is saying in chapter 8.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The author states that she conducted video observations in two preschools. At one of the preschools, three classes (called "Oak," "Birch" and "Aspen") participated and at the other, one class (called "Spruce") participated (p. 42-43). The participating preschools and classes are described at page 45-46. It is stated that a total of 73 children (aged 1-6), 17 preschool teachers and 14 assistants or other employees without a pedagogical educational background participated in the study (p. 46). The participating preschool staff is only briefly described at page 45 whereas the participating children are not described in detail. It is merely stated that of the 73 children, 34 were girls and 38 were boys (p. 46). However, it is stated that the participants were selected upon two criterion: convenience sampling and volunteer sampling (see p. 43-44).
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The study is based on two periods of observation (fall 2013 and spring 2014) in three of the participating classes ("Oak," "Birch" and "Aspen") and one period of observation in the fourth class ("Spruce"). The data material consists of 37.5 hours of video observation. The author states that she also tried to conduct field

notes but found this to be too difficult, and thus these data are not included in the study. The author states that she observed the participating preschool teachers and children in different everyday situations such as "free play", dressing, circle time and outdoor play. She also conducted observation at different times during the day. In the observation focus was kept on situations in which children and adults interact in order to uncover how socialization is performed in the preschool, with specific focus on the verbal guidance provided by the preschool teachers. For further information on the data collection method see p. 41-48.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
At page 40-41 the author states that her research approach likened most to a hermeneutic spiral and that she has deepened her understanding along the way, which has led to a partial modification of both the aim and research questions of the dissertation over the course of the project. Further she states that she proceeded from an inductive, thematic method when she initially made her observations. The first results chapter (chapter 5) was inductively analysed and thematically organized. In the two following results chapters (chapters 6 and 7), the author alternated between empirical data and the studies and theories of other researchers, which entails a more abductive analytical method. Further the author states that she transcribed the video recorded situations in which the children and adults interacted which resulted in 381 pages of transcription. The theoretical framework of the study is well described in chapter 4 and the process and method of data analysis is briefly described at page 49.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
However, at page 52 it is stated that the video recordings are stored in accordance with the Data inspection's recommendations.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The author reports the results of the study quite thoroughly.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
It is stated that the participants were given oral and written information about the aims and data collection method of the study (see p. 44+50) and that informed consent was given by the participating preschool staff and parents of the

participating children before the start of the data collection process (p. 50). The participating preschools and classes and all participants are anonymous, and pseudonyms are used (p. 51). The author also reflects upon her role towards the participating preschool staff and children and her role as a researcher in relation to the data collection procedures (see p. 46-48). Additional considerations in conducting research on, and with, young children were also taken into account. For example, children's signs of disapproval during video observations were considered (p. 50). From the author's descriptions of how she collected the data it seems that there are no ethical concerns or problems about the way the study was carried out. The author's ethical considerations are further outlined at p. 50-52.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Video observations are very appropriate for examining the research questions posed in this study. However, the author could with advantage have combined the video observational data with other data sources such as participatory observations and field notes for detailed interactional analyses and interviews with the participating preschool teachers based upon the observations made by the author. This could have strengthened the data analyses.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The data collection method and process is transparent, and it is assessed that the data collection answers the research questions posed in the study. The empirical data included 37.5 hours of video recordings of activities in the preschools in which the children interacted with their peers and with the preschool teachers. Therefore, the diversity of perspectives and contents is assessed to be sufficiently explored. However, the participating preschool teachers and children are not described in sufficient detail. Therefore, more information on participants would have strengthened the validity of the data collection process. Moreover, the author could have reflected more upon the limitations of the data collection. For example, the author could with advantage have reflected upon why the specific data collection method (video observation) was selected, and why she chose not to include other types of data sources in the study. It is assessed that the author could with advantage have combined the video observational data with other data sources such as participatory observations for detailed interactional analyses, or she could have wrote down what happened in addition to the actions that were captured on video as an attempt to detect the broader context in which the children and adults act. The author only briefly

touches upon the trustworthiness and validity of the study (see p. 52). Lastly, the author could with advantage have reflected more upon her background as a preschool teacher and how this might have influenced her data collection. This is only briefly touched upon at p. 47-48.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. Detailed transcriptions are used throughout the analysis which makes the data analysis transparent and it is possible to follow the author's interpretations. Further the author points out that it is only possible to observe and document the observable. This means that the author could for instance not interpret the participants' intentions. Rather, she could only interpret and problematise the documented actions (on the basis of her video observations) in relation to various theories (p. 41-42). The theoretical framework of the study is well described in chapter 4 and it is assessed that the theoretical approach is well suited to examine the analyses. Several theories and previous research findings are also used to reflect upon the study findings. However, other data such as interviews with the participating preschool teachers based upon the observations made by the author could have strengthened the data analyses. The author only briefly touches upon the trustworthiness and validity of the study (see p. 52). Lastly, the author could with advantage have reflected more upon her background as a preschool teacher and how this might have influenced her data analysis. This is only briefly touched upon at p. 47-48.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
To some extent. However, one can never be certain in studies of this character.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
At page 53 the author states that the present study does not seek to contribute results that claims for generalizability.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: Not at all; the thoroughly and detailed presentation of the empirical findings and transparency in the discussion provides a sound basis for agreeing with the findings and conclusions as presented by the author. Reviewer 2: Overall,

the conclusions drawn upon the findings of the study are convincing and seem trustworthy.

ID 29456116: Reikerås (2016)

Reikerås Elin. 2016. "Central skills in toddlers' and pre-schoolers' mathematical development, observed in play and everyday activities". *NOMAD - Nordic Studies in Mathematics Education* 21(4):57-78.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
June 9, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
On page 58 it is stated that "A more detailed study of the results from when the children were toddlers has been published previously (Reikerås, Løge & Knivsberg, 2012)." Further it is stated that "The present study is a part of the ongoing longitudinal and multidisciplinary Stavanger project - The learning child." (see p. 58)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English

- A6: What is the purpose of the study? (only one coding allowed)
 - Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Longitudinal study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Structured observation on the basis of the observational material "The mathematics, the Individual, and the Environments" (MIO).*
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 2 years
 - Children aged 2 years and 9 months.*
 - Children 4 years
 - Children aged 4 years and 9 months.*
- A13: In studies with children, which age groups are covered?
 - Age 0-2
 - Children aged 2 years and 9 months.*
 - Age 3-6
 - Children aged 4 years and 9 months.*
- A14: Who informs the study? (multiple coding allowed)
 - Children 2 years
 - Children aged 2 years and 9 months.*
 - Children 4 years
 - Children aged 4 years and 9 months.*
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
 - Children aged 2 years and 9 months.*

- Age 3-6
Children aged 4 years and 9 months.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The study is informed by previous research on young children's learning of mathematics (see p. 59-61).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the present study is to investigate how toddlers and pre-schoolers master central mathematical skills as observed by the kindergarten staff in children's play and everyday activities in three-month periods until the children become 2 years and 9 months and until they become 4 years and 9 months. On page 61 the following research questions are posed: (1) What mastery do children aged 2 years and 9 months in Norwegian kindergartens have of central mathematical skills? (2) How have their skills developed after two years, when they are 4 years and 9 months old?
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. On page 61-62 it is stated that "All public and private kindergartens of Stavanger municipality were invited to participate in the study. The 61 public institutions were obliged to participate in the project by their owner (Stavanger municipality), whereas the privately owned institutions were invited. Twenty-five of the private institutions (approximately 50%) accepted this invitation, which yielded a total of 86 participating institutions. The parents of children born between July 1, 2005, and December 31, 2005, who attended one of the

participating kindergartens received oral and written information about the project. (...) In addition to the period of birth, no other criteria excluded a child from participating in the study. (...) When the present study was performed, data were available for 1003 of the children (490 girls, 513 boys) when they were toddlers and for 744 (368 girls, 376 boys) of them when they were pre-schoolers." However, the sample is not described in great detail, nor is the kindergarten staff who collected data for the study.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. It is stated that the children's mathematical skills were assessed using structured observation on the basis of the observational material "The Mathematics, the Individual and the Environments" (MIO) (Davidsen et al., 2008). The observation material is described on page 62-63. Further it is stated that "The data collection was performed by the staff. They observed the children's skills in natural settings in play and everyday activities." (p. 63) However, it is not stated whether the kindergarten staff were provided with support or other types of training in using the observational schedule.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. There is limited information about data analysis. The collected data are analysed through descriptive statistics presented in terms of frequencies and percentages. Thus, the observational data is analysed by summing up the total score on the observational schedule for the toddlers (children aged 2 years and 9 months) and for the pre-schoolers (children aged 4 years and 9 months). For the latter age group, a ceiling effect was used. The 36 items observed in the present study are presented in tables 1-6 at page 65-67. The tables also show the percentage of children who master each item at the two assessment points. Thus, only level one ("Can do") is reported in the present study.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Yes and no.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that the author reports on all variables aimed to study.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment

On page 61-62 it is stated that "The 61 public institutions were obliged to participate in the project by their owner (Stavanger municipality), whereas the privately owned institutions were invited. (...) The parents of children born between July 1, 2005, and December 31, 2005, who attended one of the participating kindergartens received oral and written information about the project. They were asked for written consent for their child to participate in the study, in accordance with national research ethical standards. (...) The Norwegian Social Science Data Services approved the study." The author does not further discuss ethical aspects of the study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment

However, the research design (with staff self-reports and no data triangulation) has some limitations. However, this is also addressed by the author herself (see p. 71).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment

However, it is problematic that the author does not state whether the kindergarten staff (who collected data for the study) were provided with support or other types of training in using the observational schedule. In other words, in order to establish reliability of the data collection methods the staff will need to practice completing the schedule until they become proficient and consistent in entering data (i.e. that the observed behaviours, settings etc. are entered into the same categories consistently). Because several persons (staff members) collected data for the study, it is assessed that it was necessary to provide training sessions so that the staff members proficiently, efficiently and consistently enter the same sort of data in the same categories, i.e. that there is inter-rater reliability. However, it is regarded a strength that two staff members had to observe a child's mastery of a skill independently (see p. 71).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment

The use of tables makes the results transparent, and the reader is provided a good insight into the statistical analysis being made. Also, in the discussion the results

of the present study are linked to the results of previous studies which raise the validity of the data analysis.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The large number of children observed and the structured observations with use of a rather easy-to-manage scale seems like a solid and trustworthy design for the research questions in focus. Still, we don't know how many teachers were involved in the observations and if they received any training of using the scale (MIO) prior to the observations.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The method chosen is relevant to investigate the research questions and the findings presented as well as the conclusions made based on the findings seem relevant and sound. Reviewer 2: Yes and no. According to the author, the weak results for using number words and reciting number sequences indicate that quantitative language is not emphasised in particular in Norwegian kindergartens (p. 70-71). I find it difficult to be sure about this conclusion due to the fact that data was collected by the kindergarten staff who may not have received proper training in how to use the observational material. In other words, it is difficult to rule out sources of bias which could lead to alternative explanations for some of the findings and conclusions of the study.

ID 29255338: Rogde (2016)

Rogde Kristin, Melby-Lervåg Monica, and Lervåg Arne. 2016. "Improving the General Language Skills of Second-Language Learners in Kindergarten: A Randomized Controlled Trial". *Journal of Research on Educational Effectiveness* 9(1):150-170 .

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 20th of September, 2017.
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - "What works"
The purpose of the study is to measure the impact of a specific intervention targeting the general language skills of second-language children in kindergarten.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
Research Council of Norway, Utdanning 2020, grant. no.: 203335.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Controlled experiment with random allocation to groups (RCT)
A randomized controlled trial examining the efficacy of a general language intervention on second-language learners in kindergarten.
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Other (please specify)
Language tests (taught vocabulary, expressive language skills, receptive language skills and narrative skills).
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 5 years
Second language learners in their final year of kindergarten, mean age 5,5 years old. Tested at three time points (pre, post and a seven month follow up when they have started school).
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Language skills
 - Other, please specify
Bilingualism/multilingualism

- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
General language skills
 - Working method/educational method
A specific intervention program aimed at improving second-language learners' general language skills.
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Not applicable
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study is adequately described, both in terms of the connection to the overall research field and the position within a Norwegian preschool context. Thus, other research studies as well as theoretical assumptions are presented in pages 150-153. The Norwegian preschool context is briefly presented on page 155.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall purpose of the study is stated several times and is presented as examining the efficacy of an intervention aimed at improving second-language learners' general language skills in their second language. On pages 153-154, the authors present the goals and hypotheses for the study. The relevance of studying this particular matter is argued for by the authors with reference to previous research findings.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is presented in adequate detail, and the recruitment criteria applied are clarified, see pages 154-156. The sample consists of 115 children, with a mean age of 5,5 years old (standard deviation is provided). The process of randomizing these children to an intervention and a control group is adequately clarified and a flow chart is provided (page 155) in order to create a visual representation of the research process, from enrollment to the final testing stage. This gives the reader a good sense of the process and the flow of respondents through the different stages. The researchers argue for their choice of randomizing at the individual level (see page 154).

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The measures and procedures used are adequately described in pages 156-157. The content of the intervention program is also well presented (pages 157-159). The authors account for the procedures implemented in order to monitor the treatment fidelity of the intervention, see page 159.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Generally speaking, the authors provide adequate information (e.g. in the form of numbers and tables) on the advanced statistical analyses performed. The different models used and the reasons for choosing them are presented, albeit in a short and technical form. The authors do not present a clear-cut analytical strategy in the form of a separate section before commencing the analyses, rather the information is given as the analysis progresses. This however is probably in line with the common form of statistical presentation applied within the research field. This reviewer finds that the figures used to illustrate the analytical findings (see pages 162-163) do not serve their purpose of clarifying and visualizing the data (they do rather the opposite).
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
As reflected in the answers to questions C1-C5, the study is reported with good transparency.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Overall, the authors provide a report in line with the purposes of the study. A slight note of criticism is noted regarding the discussion section of the study where the authors seem concerned with justifying their particular approach and promoting positive aspects and good results, while not being as aware of potential biases or pit-falls. This is not a major criticism, but should be mentioned nonetheless.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
A short statement on research ethics is provided on page 155 where it says that ethical approval was obtained from the Norwegian Social Science Data Services,

and that informed parental consent was obtained for each child in the study. The study would have benefitted from further reflections on the potential impact of performing such an intervention on the participating children and kindergartens, however this might not have been possible due to the limits imposed by the journal article format.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of performing a randomized controlled trial when assessing the efficacy of an intervention is in line with common scientific practice and thus seems highly appropriate. The authors provide clear descriptions of both sampling procedures and intervention design, and they argue for the choices made regarding the content of the intervention (e.g. having a particular focus on expressive language).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors attempt to secure the reliability of intervention implementation in several ways. First of all, they take measures to prevent treatment diffusion, see page 157. They also use randomization on the individual level in order to allow for a mix in linguistic backgrounds and experiences with the second language between study participants. The implementation fidelity of the intervention is monitored through audio recordings and logs as well as through a check-up on a random selection of sessions (see page 159 for a presentation of the authors attempts to monitor treatment fidelity). In terms of the language measures used, Cronbach's Alpha coefficients are calculated for all measures and the values found are satisfactory (see pages 156-157). It is stated on page 156 that trained research assistants performed the testing, and that the tests were administered in a fixed order.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The quantitative analyses performed are described in a highly technical manner, but it seems to this reviewer that all the necessary checks and controls are performed and the analysis are generally robust and sound. E.g. the authors control for kindergarten dependency (page 160) and they perform tests in order to ensure that the different variables can be interpreted similarly across time points (pages 160-161). They also control for the initial language status of the children (to ensure that treatment effects do not differ as a function of this status, see pages

154+165). On page 166, the authors briefly reflect on effect sizes and the practical interest of the study. When presenting the results, the authors draw on other research findings. A note of criticism must be mentioned pertaining to the use of figures 2 and 3 (pages 162-163) which do not seem to provide the overview they were intended to. Also, this reviewer finds the discussion part of the study to be somewhat over-looking potential biases, leaving out important critical reflections on the study that all researchers must attend to.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
Overall, this reviewer (Reviewer 1) has no concerns regarding the design and methodology of this particular study. Both data collection processes and statistical analyses seem sound and robust, and the authors are aware of issues of reliability. However, there is some lack of critical reflections on potential biases and alternative explanations for the findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
Reviewer 2: On the one hand, the generalizability of the study is not directly addressed. On the other hand, the authors reflect on how the results of this study are in line with results from other similar research studies. In this, there is an element of generalizability.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: Overall, the findings seem plausible and are linked to other research studies within the field. Adequate data are presented in the analyses and the statistical procedures appear robust and are on an advanced level. The only flaw seems to be the lack of critical reflections on the credibility and trustworthiness of the findings (thoughts on potential biases and alternative explanations, shortcomings of the methodology chosen etc.). Reviewer 2: No.

ID 27392530: Roll-Pettersson (2016)

Roll-Pettersson Lise, Olsson Ingrid, and Ala'i-Rosales Shahla. 2016. "Bridging the Research to Practice Gap : A Case Study Approach to Understanding EIBI Supports and Barriers in Swedish Preschools". *International Electronic Journal of Elementary Education* 9(2):317-336.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
6th of october, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
This study was supported by grants from Sunnerdahl's Handicap foundation and CKVO from Stockholm University.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
"A case study approach with roots in ethnography was chosen to explore this issue.[...]Two preschools exemplifying 'high quality practice' were studied and information was collected through multiple sources during a 12 month period, this included participant observations, direct observations, semi-structured interviews with key informants; paraprofessionals, parents, special educators, habilitation specialists and a focus group interview."
 - Case study
"A case study approach with roots in ethnography was chosen to explore this issue.[...]Two preschools exemplifying 'high quality practice' were studied and information was collected through multiple sources during a 12 month period, this included participant observations, direct observations, semi-structured interviews with key informants; paraprofessionals, parents, special educators, habilitation specialists and a focus group interview." [...] "Data were collected using multiple sources of information during a 12 month period. [...] the sources of evidence used in this study were participant observations, semi-structured interviews with key informants, a focus group interview, and direct observations."
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
"ethnography participant observation was used to obtain a deeper picture of contextual and cultural aspects affecting implementation of EIBI. This involved multiple visits to the preschools, taking field notes, unobtrusive observations which entailed taking part in daily activities within the preschool, conversing with staff, and helping out in general activities, such as meals, circle time or learning activities involving the child with ASD."
 - One-to-one interview

- Focus group interview
"Two preschools exemplifying 'high quality practice' were studied and information was collected through multiple sources during a 12 month period, this included participant observations, direct observations, semi-structured interviews with key informants; paraprofessionals, parents, special educators, habilitation specialists and a focus group interview."
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 5 years
Preschool 1: Ludvig is five years old and has autism Preschool 2. Lewis is also five years old and has autism,
 - Parent
"semi-structured interviews with key informants; paraprofessionals, parents, special educators, habilitation specialists and a focus group interview."
 - Governance: Municipal
The case study described in this paper evolved around two preschools and two children with autism, affiliated habilitation centers and municipalities within the same geographical region
 - Other, please specify
"semi-structured interviews with key informants; paraprofessionals, parents, special educators, habilitation specialists and a focus group interview." [...] "Two habilitation centers with adjacent municipalities were contacted by the authors to participate in the project. The habilitation centres were specifically chosen due to having a history of using EIBI practices, staff who have studied behavior analysis at university level meeting the requirements of the Behavior Analyst Certification Board (2016; see BACB.com), as well as, having research and development projects with a basis in ABA and/or EBP. These centers also provide introductory, "first step" work-shops for paraprofessionals and parents concerning ASD and the basic principles and procedures of ABA. The centers were requested to recruit one to two families with a child diagnosed with autism who has been in a "high quality" EIBI program for at least one year"
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 5 years

- Parent
- Governance: Municipal
- Other, please specify
semi-structured interviews with key informants; paraprofessionals, special educators, habilitation specialists.
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Health
 - Other, please specify
the theme for the study is: How to translate research to practice?
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Overall, the educational feature regards inclusion of children with autism. The study looks upon implementation of intervention adressed at children with autism, specifically the study looks at how to translate research to practice in order to identify barriers and supports for the implementation of the intervention.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Inclusion/exclusion
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Yes, the background of the study is well-described, as a litterature review is made before conducting own research. The aim is very clear.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
"The aim of the present study is to obtain a clearer picture of existing barriers as well as supports effecting implementation of EIBI in Sweden. Our assumption is that by utilizing a case-study approach we will make visible the interplay between cultural components, beliefs, and tensions not otherwise evident in either

experimental or naturalistic prospective design studies. It is also our assumption that the findings derived from the present study may contribute to obtaining a deeper understanding of possible systemic contingencies which may in part explain differing results as evidenced in Fernell's et al. (2011) naturalistic study."
EIBI= early and intensive behavioral intervention

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
It's a complex study and due to the publication type, the methodological approaches are not perfectly described. The descriptions are 'good enough'

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
"The individual and focus group interviews were recorded and transcribed verbatim. In the data analysis process the interview transcripts and field notes were combined and informed by a grounded theory approach. The first and second authors separately read the transcripts and used line-by-line coding to identify categories and patterns. Then they met, compared categories and reached consensus concerning rubrics and content, and they utilized an abductive analysis process to relate findings with previous research to generate interpretation (Dey, 2012)."

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment

- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
"According to Pring (2006) an overriding ethical principle is the importance of respecting the dignity and confidentiality of the informants. In order to keep within this principle the description of informants and preschools has been kept at

a bare minimum and names of persons, organizations and places have been omitted or changed. The habilitation centers and the two preschools in which participant observations took place were selected as examples of high quality EIBI to minimize the risk of researchers being put in the dilemma of possibly having to breach trust with informants through disclosure of possible of wrong doings. In situations in which sensitive information of relevance for the project is disclosed only information triangulated by both parents and paraprofessional is presented. Habilitation and municipality professionals were asked general questions concerning implementation of EIBI within the region and not questions pertaining to the specific cases."

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
"In conclusion of the data analysis process member checks (Lincoln & Guba, 1985) were made to ensure credibility of findings. This entails that participants were sent a draft of the manuscript and were requested to verify the accuracy of their citations as well as the relevance of the text. This resulted in comments from one of the special educators clarifying her role, resulting in changes in the manuscript, and from one of the mothers supporting findings, however she pointed out that now when her child now goes to school there is much less competence among pedagogical staff."

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable in a contextual or conceptual way
"The goal of the case study is to generalize and expand theoretical propositions rather than establish a causal relationship between independent and dependent

variables. Data is collected through key-informants using multiple sources of evidence (Yin, 2009)."

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The results are explicitly presented and discussed related to the the original research questions. The findings include new knowledge and are critically discussed as well as limitations and strengths of the study are briefly reflected.

ID 27434592: Samuelsson, (2016)

Samuelsson Ingrid Pramling, Williams Pia, Sheridan Sonja, and Hellman Annette. 2016. "Swedish preschool teachers' ideas of the ideal preschool group". *Journal of Early Childhood Research* 14(4):444–460.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
5th of september, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The phenomenon investigated in this study is the ideal group size in kindergarten according to the preschool teachers. "Phenomenography is a method for discerning what is behind people's ways of talking and what their taken-for-

granted ways of looking at something are, that is, the perspective from which they see the world around them related to the question and/or phenomenon at hand."

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
The Swedish Research Council
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
The data used here come from a single open-ended question, formulated 'How is the ideal preschool group composed and why? Describe!' The answers to this single question comprise 48 pages of typed text, which forms the basis for the analyses.
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
The data used here come from a single open-ended question, formulated 'How is the ideal preschool group composed and why? Describe!' The answers to this single question comprise 48 pages of typed text, which forms the basis for the analyses. The data are part of a larger survey with both closed and open-ended questions.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
The questionnaire consists of the answers of 698 preschool teachers from preschools in 46 municipalities, of which 645 are community preschools and 53 private, from large cities as well as from smaller communities. In all, 97 per cent are women and 2 per cent are men, most preschool teachers are in the ranges between 40 and 49 years and 6 per cent has a master education. Most preschool are ordinary, but 4 per cent work in Montessori preschools, 14 per cent claim to be Reggio Emilia inspired and 0.4 per cent Waldorf preschool.
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)

- Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
Classroom management
 - Day-care quality
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Not relevant, this study does not have any main educational feature
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Management and organization
ideal organising of preschool group
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
To some extent the context is adequately described. a literature overview is given as the swedish day care context is described. There is some “lack” of knowledge on recent and international studies of group/class size
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
To some extent the sample is described. The limitation in the description is due the fact that the data is part of a larger study. Aso, it is lacking response rate/ dropout information

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
Yes on page 448 a description is given.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
yes the data are analysed inductively in order to identify categories in the answers from the preschool teachers.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
This is difficult to assess as the reviewers don't have access to the answers of the questionnaire, however the analyses seem thrustworthy.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The analysis is based on one question in the questionnaire with the purpose to find out the concepts of ideal group composition in preschool. Data is collected from almost 700 preschool teachers.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
yes, but eventhough the study has a phenomenographic approach, one reviewer finds it as a weakness that the reasearch question is studied/investigated through only one question. The aim and research question in this study is: "The aim of this article is to describe and analyse preschool teachers' ideas of what an ideal preschool group is. Ideal is here linked to how preschool teachers idealize their views of what would be optimal for their work in relation to children's learning. The research question we have addressed is, what do preschool teachers conceive

to be a desirable preschool group, and why?" this is answered by means of the following question: "How is the ideal preschool group composed and why? Describe!" The reviewer I would have preferred if this overall question consisted of a number of subquestions.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
No, the reviewers do not differ from the authors overall findings.

ID 27246073: Sandseter (2016)

Sandseter Ellen Beate Hansen, and Sando Ole Johan. 2016. "'We Don't Allow Children to Climb Trees": How a Focus on Safety Affects Norwegian Children's Play in Early-Childhood Education and Care Settings". *American Journal of Play* 8(2):178-200.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
August 18, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
It is stated that the data used for the present study derives from a survey the authors conducted on injuries and injury prevention in Norwegian ECEC settings during 2012 (Sandseter et al. 2013). (p. 182)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Ministry/government/local government, please state the name of the funder
It is stated that the data used for the present study derives from a survey the authors conducted on injuries and injury prevention in Norwegian ECEC settings during 2012 (Sandseter et al. 2013), and that this work was funded by the Norwegian Ministry of Education. (p. 182)
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
The questionnaire collected both quantitative and qualitative information. However, in this article the authors merely describe and analyse the answers of the responses to the questionnaire's open-ended questions (that is the qualitative text data). (see p. 183)
- A10: What is the design of the study? (multiple coding allowed)
 - Cross-sectional
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
The authors used a web-based questionnaire to collect data. The questionnaire used fixed questions and defined reply categories given in advance. However, the questionnaire also included an open-ended question which gave the respondents a possibility to write personal answers. In the present study the authors merely aim to describe and analyse the answers of the responses to the open-ended question (see p. 183)
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
The study investigates how Norwegian ECEC practitioners handle the increasing safety focus in Norwegian society and how it influences their practice in the ECEC setting.
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Leadership/management
- A15: In cases where children inform the study, which age groups are included?

- Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Organization and management
 - Children's physical action and development in day care
 - Other, please specify
The main focus of the present study is on risky play and safety in ECEC institutions.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Management and organization
 - Physical environment
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical frame of the study, previous research on children's risky play and the Norwegian context in which the study is conducted are described (see p. 178-182).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the present study is to explore how Norwegian ECEC practitioners handle the increasing safety focus in Norwegian society and how it influences their practice in the ECEC setting. The following research question is posed: How does Norwegian society's focus on safety influence play and activities in its ECEC settings? (p. 182)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The authors state: "We distributed our questionnaire (QuestBack)

about child injuries and procedures preventing them by e-mail to the managers of every ECEC setting (N=6,469) in Norway. Managers from 2,105 settings completed the questionnaire, a response rate of 32 percent. Our sample matched the geographical distribution of Norwegian preschools throughout the country, the number of private and municipal programs, the proportion of male to female employees, and the number of children and their gender and age. The responding ECEC programs may have better established safeguards for and more vigilant attitudes toward preventing injuries than others, but because we aim merely to describe and analyze the answers of the study's 879 responses to our open-ended question, we did not test how representative our sample was, nor did we consider it vital to do so." (p. 183)

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

It is assessed that the method of data collection is sufficiently described, considering that this is a short journal article. The authors state: "We used a questionnaire to gather details on injuries based on the gender and age of the children involved as well as by the nature and severity of the injuries. We sought to find how the ECEC settings worked to prevent injury, including asking about health and safety routines and the training offered in life saving. We also asked whether a focus on safety in society in general influenced play and activities in the ECEC setting." (p. 183) The questionnaire and data collection procedures are well described in the study/report of which the data used for the present study derives (See Ellen Beate Hansen Sandseter, Ole Johan Sando, Ingar Pareliussen, and Camilla Kalvatn Egset (2013). Kartlegging av hendelser og ulykker som medfører skade på barn i barnehage. Still, the authors could with advantage have described the process in creating, testing and distributing the questionnaire in greater detail in the present article. The questionnaire used fixed questions and defined reply categories given in advance. However, the questionnaire also included an open-ended question which gave the respondents a possibility to write personal answers. In the present study the authors merely aim to describe and analyse the answers of the responses to the open-ended question (see p. 183)
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment

It is assessed that the methods and procedures of data analysis is adequately described. The authors state: "In our study, we read the text of each response thoroughly and coded them thematically. We then categorized these codes into broader clusters by theme. The process involved constant comparisons with previously categorical descriptions (Zhang and Wildemuth 2005) to achieve an accurate interpretation and categorization. Although the questions concerned how

a society's focus on safety affects play in any ECEC setting, many respondents described the measures they used to prevent injuries in their ECEC program. We asked them to describe the limitations on physically active play, including not only during normal outdoor play on site but also during field trips away from the institution. (We also asked what measures they took to prevent injuries, including staff training in injury prevention, the development of institutional routines that address child safety, and playground inspection and risk assessments. But we do not directly address actions for preventing injuries in this article.) We began with a total of twenty factors that limited children's physically active play then consolidated them into six subcategories: (1) play and activities, (2) outdoor space, (3) water, (4) field trips, (5) weather and seasonal conditions, and (6) other limitations in physically active play. After we had analyzed the descriptions and created these categories, two independent researchers reviewed every answer once more within each category to ensure we had been consistent in our coding. The length of the written responses varied from a few words to almost two hundred words. Some of the richer responses described multiple aspects of restrictions and limitations and were therefore divided and coded into several of the categories. On average, the text of each response was placed in 1.3 categories, ranging from one category to four." (p. 183-184)

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment

- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on all variables aimed to study.

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical issues are not discussed by the authors. However, on page 183 the authors state that the study was approved by the Norwegian Social Science Data Services.

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It is assessed that a questionnaire survey is sufficient enough for addressing the research question posed. However, a clear limitation which the authors also highlight themselves (see p. 195) is the fact that the authors received a low

response rate calculated from the total number of ECEC settings in Norway and that not all the participating managers responded to the open-ended question, thus, drawing conclusions based on the qualitative analysis of data should be done with caution. The authors could with advantage have used data triangulation in order to obtain a more extensive data material which would have given a more solid base for conclusions.

- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. However, the process in creating, testing and distributing the questionnaire could have been described in greater detail. The response rate is quite low (32%) and the achieved sample size for the qualitative data analysis is rather small (n=335). Thus, the results are not representative of the population. However, this and other limitations of the data collection is also commented on and taken into consideration by the authors themselves (see p. 195-196).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The analytical methods and processes of coding and categorizing the qualitative text data are well described and presented with sufficient transparency, though only related to one methodological literature reference. It is evident which statements were chosen and why. The thematic coding and categorization of responses to the open-ended question in the survey is well described, and two independent researchers completed the coding process and also discussed the codes and categories (see p. 183-184). The results are also well contextualized and discussed in relation to previous research. Considerations about the limitations of the study findings are provided by the authors.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The study obviously has some limitations, such as a low response rate and the fact that not all the participating managers responded to the open-ended question. This is, however, also highlighted by the authors themselves (see p. 195).
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
On page 195 the authors state: "(...) we have aimed to conduct a qualitative study

and have analyzed and presented the results wishing more to indicate areas for further discussion rather than to make grand generalizations."

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The findings are explicit, and the researchers have discussed the credibility of their findings. Furthermore, the findings are discussed in relation to the original research question and the findings reveal new understandings of the subject in matter.

ID 29323843: Sandseter, (2016)

Sandseter E B. H, and Seland M. 2016. "Children's Experience of Activities and Participation and their Subjective Well-Being in Norwegian Early Childhood Education and Care Institutions". *Child Indicators Research* 9:913–932.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
May 8, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Exploration of relationships
The overall purpose of the study is to develop more knowledge about what promotes and constrains children's well-being and participation in ECEC institutions. The research question is as follows: How do children experience their

subjective well-being in their everyday life in the ECEC setting, and how do their experiences of activities and opportunity for participation relate to their subjective wellbeing? (p. 914)

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Ministry/government/local government, please state the name of the funder
It is stated that the Norwegian Ministry of Education and Research funded this project (p. 930).
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
The researchers had conversations (structured interviews) with the children based on an electronic questionnaire that the researcher completed discretely on a laptop or a tablet during the conversation.
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
Age 4-6.
- A14: Who informs the study? (multiple coding allowed)
 - Children 4 years

- Children 5 years
- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Age 4-6.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Equal opportunity
Children's opportunities for participation in ECEC institutions.
 - Health
Children's subjective well-being in ECEC institutions.
 - Perspective of the child
The focus of this paper is a study in which children's experiences of well-being and opportunities for participation in ECEC institutions were explored through children's own perspective.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Children's experiences of well-being and opportunities for participation in ECEC institutions, explored through children's own perspective.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Social system
 - Physical environment
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical frame of the study, previous research on children's subjective well-being, and the Norwegian context in which the study is conducted are described (see p. 914-917).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall purpose of the study is to develop more knowledge about what promotes and constrains children's well-being and participation in ECEC

institutions. The research question is as follows: How do children experience their subjective well-being in their everyday life in the ECEC setting, and how do their experiences of activities and opportunity for participation relate to their subjective wellbeing? (p. 914)

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment

On page 917-919 it is stated that "The children who participated in this study were drawn from 18 ECEC institutions in Sør-Trøndelag County (the middle part of Norway). Sør-Trøndelag was chosen because it represents a typical county in Norway with both rural and urban communities, and with both inland and coastal areas. Sør-Trøndelag County consists of 25 municipalities of which 8 of them were selected to be included in this study. The municipalities were selected randomly, although four municipalities were discarded from the list because they had less than 1000 inhabitants and less than four small ECEC institutions in their community. This was done to ensure full anonymity of the participating children due to the Norwegian ethical guidelines for research. From these 8 municipalities, 18 institutions were selected randomly but with criteria to cover various types of institutions with regard to size, ownership, organization and professional profiling. Variation in the size of the municipality and type of ECEC institution was emphasized. Each of the institutions was contacted first through a telephone conversation with the manager, followed up by more information on e-mail if they were interested in the study. Out of the first 18 institutions that were selected, three did not want to participate, upon which three more were randomly selected from the same municipalities. All these three accepted to participate. As the data collection was about to start, one institution, a small department-organized ECEC, decided to withdraw from the study because of time pressure. This institution was not replaced because of the project's time limits set by the Norwegian Ministry of Education and Research. (...) From each of the 17 ECEC institutions, 10 children were randomly drawn from the age group of 4–6 years. All the selected children agreed to participate. In one institution, 11 children participated; therefore, the total number of children is 171. Of the 171 participating children, 51.5 % were girls and 48.5 % were boys. Nearly half of the children were 6 years old (48.5 %), while nearly one-third were 5 years old (31.6 %), and one-fifth were 4 years old (19.9 %)."
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

On page 919-920 it is stated that "The collection of data was managed and conducted by two researchers with the help of three research assistants. The

assistants were students in a Master's degree program in Early Childhood Education and Special Education. The assistants were given thorough training and conducted several test interviews before data collection began. The results of the test interviews were then discussed in plenary with the whole group of data collectors. The research assistants also received guidance from the head researchers along the way if needed. (...) The researchers had conversations with the children based on an electronic questionnaire that the researcher completed discretely on a laptop or a tablet during the conversation. The questionnaire contained questions about how children experience the everyday life in the ECEC institution, the activities they engaged in, their relationships with other children and the staff in the ECEC institution, and the institution's physical environment (both indoors and outdoors). Many of the questions were also related to children's experience of participation in the ECEC institution to identify whether children felt that their views were given weight, they were able to express their views on the ECEC institution's daily activity, and they perceived opportunities to participate actively in planning and evaluating the ECEC institution's activities (NMER 2005 - Kindergarten Act, paragraph 3). This article focuses on presenting results from the questions about children's general well-being and experiences of the ECEC physical environment, activities and more direct participation. (...) Some of the questions had three response alternatives, while most of them had either two (e.g., yes/no) or four alternatives (e.g., yes, often/yes, sometimes/no, almost never/no, never). In the case of four response alternatives, a technique resembling the technique used in The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter and Pike 1984) was used. Specifically, the children were asked the question (e.g., "Do you think being in your ECEC institution is boring?") and answered "yes" or "no". Then, the interviewer asked follow-up questions to get a more nuanced answer. For example, if the child said "yes", the interviewer asked: "do you mean 'yes, often' or 'Yes, sometimes'?" This technique was tested in a pilot study, and amendments were made to the wording and number of questions before the actual data collection was conducted."

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment

On page 920 it is stated that "Statistical analyses were conducted using the IBM SPSS Statistics 22 program. General descriptive analyses (percentages) were applied to find the distribution of answers and variables, and bivariate correlation analysis was used to explore the correlations between variables. Independent samples t-tests were conducted to find possible differences between items."
- C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment
Overall, a study with good transparency and coherence.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors report on all variables aimed to study.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The study was approved by the Data Protection Official for Research in Norway. Informed consent was obtained from parents. Other considerations of ethical standpoints were also taken into account, for example children's signs of disapproval during the data collection and the relationships of power between the researcher and the participating children were considered (See p. 920). Further it is stated that the reseachers only collected the children's year of birth (not the date), and the children did not have to answer all the questions if they did not want to (p. 919).
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
On page 917 the authors briefly reflects on the choice of using a questionnaire: "(...) because much of the research done on children's life in ECEC settings has applied qualitative methods to a rather limited number of children, this study aimed to use methods that allowed for the inclusion of a larger number of children and the use of quantitative data.". The use of a questionnaire to create an overview and to form the basis for further research on children's subjective perspectives on their well-being and participation in ECEC with more objective measures of the ECEC institution's quality seems appropriate and sensible.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The authors do not take the subjects of validity, reliability etc. into consideration per se. However, they do present their data collection methods (sampling strategy, questionnaire etc.) openly and with sufficient detail, allowing the reader to follow the research process. Therefore, it is assessed that there are no apparent problems concerning the methodological procedures of the study.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The theoretical framework for analysis is well described. General descriptive analyses are performed, and bivariate correlation analysis are used to explore the correlations between variables. Graphs and tables are used to illustrate the findings which are described and discussed. T-tests are performed to find possible differences between items. The data material is critically assessed, and the authors consider alternative explanations of their findings. However, the authors do not take the subjects of validity, reliability etc. into consideration per se.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The statistical analyses made in this study seem solid, and the authors are transparent as to when it is possible to claim statistical significance.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the author concludes that this study is not generalizable
The authors discuss the issue of representativeness on page 918: "(...) when samples are drawn randomly between counties, municipalities and institutions, there is a high likeliness of securing representativeness. Still, due to the fact that Norwegian national statistics do not have information on the distribution of ECEC institutions' size on a national level, there are some reservations regarding the representativeness of the data from this study". One could argue that the study is generalizable in a contextual or conceptual way, and also that the results may be relevant to other groups with similar characteristics.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The child's perspective is an important factor for preschool well-being and this is thoroughly accounted for in the study. Reviewer 2: The authors are critical towards their own methods and analyses, and they discuss alternative explanations of their findings. They make suggestions, pose ideas and interpretations and ask for more research within the field, while staying aware of the study's limitations. The findings are explicit and reflect careful methodological and theoretical considerations, and thus the conclusions made seem reasonable.

ID 27392534: Sepp (2016)

Sepp Hanna, and Höjjer Karin. 2016. "Food as a tool for learning in everyday activities at preschool : an exploratory study from Sweden". *Food & Nutrition Research* 60(1):32603.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
September 21, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Private funding, please state the name of the funder
The study is funded by the Academy of Gastronomy [Gastronomiska Akademien] (see p. 6).
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
It is the experiences and the meanings that preschool teachers associate with involving food in their educational activities that are of interest in this study. On page 2 the authors state: "The study design chosen to study teacher's experiences associated with involving food in planned educational activities was exploratory and had three stages. The first involved introducing participants to the study and to pedagogic methods. The second involved teachers working on their own by involving food in planned educational activities in their preschools during 1 year. The last involved data collection with qualitative interviews."
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
Each participating preschool teacher was interviewed on one occasion, either individually (for practical reasons) or in a group of 2-5 participants.
 - Focus group interview
Reviewer 1: It is not quite clear whether there were focus groups or group interviews ; they are just talking about group interviews (p. 2)
 - Video
The conducted interviews were video recorded.
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - No information provided on the age of the children
- A13: In studies with children, which age groups are covered?
 - Other, please specify
No information provided on the age of the children.
- A14: Who informs the study? (multiple coding allowed)

- Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Health
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working method/educational method
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both previous research on healthy-eating interventions in preschools and the Swedish ECEC context in which the study is conducted are described (see p. 1-2).
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The overall aim of this study was to explore the experiences and meanings that preschool teachers associate with involving food as a tool for learning in planned educational activities (p. 2).
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: They give some information about the group of informants but no selection criteria, dropout rate (regarding number of institutions invited and

number of staff that agreed to participate). Reviewer 2: The sample recruitment is briefly described but unfortunately the sample is not described in much detail. An exploratory study was conducted in 14 preschools with 131 teachers. Twenty semi-structured individual or group interviews with 45 preschool staff were conducted, and 10 interviews were selected for analysis. Regarding sample recruitment it is stated that "The first author was involved in a larger Leader project called 'The children's best table' involving both preschools and schools with children aged 1-12. During fall 2012, county dietary managers and principals at these preschools were informed about the study of this article and invited to participate, and those who were interested enrolled. All teachers at these preschools were orally invited to participate in this study, and 125 decided to accept. In addition to these, one additional preschool was orally invited to participate and accepted, making the total number of participating preschools 14, with 131 teachers. All preschools were located in the south of Sweden." (p. 2). The characteristics of participants are only briefly described. In total, 45 preschool staff members from 10 different preschools were interviewed. All participants were women with a preschool-teaching degree (see p. 2).

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment

It is assessed that the methods of data collection is adequately described, considering that this is a short journal article. However, the authors could with advantage have provided examples of questions from the interview guide. On page 2 it is stated that "The interviews were conducted by the first author, who was trained in interview techniques and group interview methodology, as described by Patton. Interviews revolved around three themes about working with children in preschool: food in general at preschool, the curriculum in relation to food, and working with food in planned educational activities. Each teacher was interviewed on one occasion, either individually (for practical reasons) or in a group of 2-5 participants. The interviews lasted from 40 to 60 min and were video recorded."
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment

It is assessed that the procedures are described in sufficient detail. On page 2-3 it is stated: "The preliminary analysis began during the interview, and a pattern of teachers experiencing education with and about food as fun (possibilities) although hard to execute (barriers) emerged. Because saturation thus was experienced in the preliminary analysis of the interviews, a decision was made to transcribe verbatim one of two interviews per preschool, in total 10 group interviews with 23 teachers, using the qualitative software programme Transana,

version 2.42. The transcripts were read through several times by both authors separately and sorted into codes using the analysis software Atlas.ti, version 7.5. It is the experiences and the meanings that preschool teachers associate with involving food in their educational activities that are of interest in this article. Therefore, a social constructionist perspective was chosen because it provides an analytical framework through which it is possible to see how preschool teachers make sense of teaching about food. Wortham and Jackson (42) have described education as a 'set of processes that occur in events and institutions that involve both informal socialization and formal learning' (p. 107). This means that from a social constructionist perspective, education is a process in which various objects are (re)constructed, such as the role of the teacher. By adopting this theoretical perspective, it was possible to make visible how teachers make sense of teaching about food in relation to themselves, children, and preschool. The codes were discussed and sorted into a matrix in which both the object that was being constructed (what) and the social relationship in which it was being constructed (how) were captured (42). According to Wortham and Jackson (42), an analysis presupposes, or assumes, that some things are solid. In the analysis of the preschool teacher interviews, it was apparent that the informants primarily made their experiences meaningful in relation to perceived barriers or possibilities. This meant that in the analysis, we assumed that the objects (barriers and possibilities) and mechanisms (teachers, children, and organisation) were stable aspects of the social world (see Fig. 1)."

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes. The methods and processes of collection and analysing data are described in a rather detailed way in light of this being a short journal article. However, the study lacks detailed information on sample.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
Reviewer 2: There is a rather detailed description of the data analysis process (considering that this is a short journal article), and it is assessed that the aim of the study is sufficiently covered. In addition, the authors give the reader some insight into the interview data by using central quotes to exemplify the main findings. Reviewer 1: It should be mentioned that we do not know where the 10 preschools came from (selection?)

- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 3 the authors state: "The Ethical Regional Board at Lund University vetted the project protocol, and the requirements identified by the Swedish Research Council (2011) were followed. In addition to this, both selected pedagogical methods were based upon a foundational view that participation is voluntary and that all children have a right to their own taste and a right not to taste or participate." The authors do not further discuss ethical aspects of their study.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent. It is assessed that an interview study is sufficient enough for addressing the overall aim of the study (that is to explore the experiences and meanings that preschool teachers associate with involving food as a tool for learning in planned educational activities). However, the authors could with advantage have explained in more detail why only one of two interviews per preschool was transcribed, and why only group interviews were selected for the final analysis (see p. 2+6).
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The sample recruitment is described, and it is stated that one person (the first author) conducted all interviews. However, the overall interview guide is not provided, nor is examples of questions from the interview guide. Furthermore, the sample is not described in much detail. Thus, more information on the participating preschool teachers would have been desired. Also, the authors could have reflected more upon the methodological limitations of the data collection.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analytical framework of the study is only briefly described. However, a few excerpts of the interview transcriptions are used to illustrate the authors' interpretations. This is regarded as a plus, as is the fact that previous research findings are used in the discussion of the findings of the present study. It is assessed that the transparency related to data analysis procedures is sufficient, considering that this is a short journal article, and that it is transparent how the authors have categorised the collected data. In other words, it is transparent how

the authors arrived at the results, and the results seem valid. Also, the authors briefly reflect upon challenges of the chosen design and methods used: "There is a shortage of educational material related to food in preschool, and therefore, Cook and learn step-by-step was chosen. The Sapere method was chosen because it has proven to be a successful method. Because the books are self-explanatory, we assumed that there was no need for training in methods. Judging by the result, we can retrospectively see that we should have educated the teachers about the methods so they would feel secure. Moreover, even the kitchen staff should have been included, even though the study focused on the planned educational activities, since it became apparent that it was impossible for the preschool teachers to talk about food without bringing in the whole meal situation, which involves the kitchen staff very much." (p. 6). However, the authors could with advantages have discussed in greater detail how this methodological limitation and weakness might have affected the findings of the present study. Furthermore, the authors could have explained in more detail why only one of two interviews per preschool was transcribed, and why only group interviews were selected for the final analysis (see p. 2+6).

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
It is difficult to rule out bias in studies of this character. The authors could with advantage have elaborated on the limitations of the data source or presented alternative explanations for their findings.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The findings are explicitly presented and well related to the research questions. Some limitations of the study are mentioned (Methodical considerations, p. 6). The study is definitely presenting novel understanding/knowledge. Reviewer 2: The authors describe most of the procedures of data collection and analysis in an adequate way, and the conclusions seems sound in light of the results presented.

ID 27392535: Sjöman (2016)

Sjöman Madeleine, Granlund Mats, and Almqvist Lena. 2016. "Interaction processes as a mediating factor between children's externalized behaviour difficulties and engagement in preschool". *Early Child Development and Care* 186(10):1649-1663.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
22/3-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The project is part of a longitudinal project. There is no further details on the project. In p. 1652 the authors write: "The data for this study were taken from a longitudinal project funded by the National Board of Health and Welfare and FORTE, Swedish Research Council for Health, Working Life and Welfare, in Sweden".
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Exploration of relationships
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
National Board of Health and Welfare and FORTE, Swedish Research Council for Health, Working Life and Welfare, p. 1652.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Cross-sectional
the preschool staff completed a questionnaire about individual children's engagement and behaviour difficulties.
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Aged 1 to 5 years.
 - Age 3-6
Aged 1 to 5 years.

- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
 - Children 2 years
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Aged 1 to 5 years.
 - Age 3-6
Aged 1 to 5 years.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Pedagogical practices
 - Other, please specify
Behavioural difficulties e.g. hyperactivity.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study is adequately described. There is an introduction, conceptual framework and research on topics related to the current study.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The aims of the study are outlined in several parts throughout the study. They are described in great detail under the heading "Aim and hypotheses of the study" in p. 1652. The overall aim of the present study was to examine teacher responsiveness and peer interaction as mediators between two types of externalizing behaviour difficulties and two types of engagement in preschool. Three hypotheses were tested: (1) Hyperactivity will have a direct negative effect on core and developmental engagement; (2) Conduct behaviour difficulties will have a direct negative effect on core and developmental engagement; and (3) Teachers' responsiveness and positive peer interaction will have an indirect positive effect on the relationship between the two types of externalizing behaviour difficulties and the two types of engagement, p. 1652.
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample is described in p. 1652-1653. The sample consisted of 640 children. There is great detail on the characteristics of the sample p. 1652-1653. The ages of the children were 18 months to 71 months. However, it would have been interesting to have information on the number of children who received formal special support (the authors merely write that some children in the sample received and did not receive formal special support). The authors inform that the data was part of another project and details of the sample recruitment is somewhat missing in this paper.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
There is a clear and extensive description of the questionnaire used for data collection. The preschool teachers collected the data on the children in the preschool. It was somewhat unclear how this questionnaire was distributed among the preschool staff and how they were briefed on this data collection. This might have been due to the fact that the project was part of a larger project and that the researchers were not directly involved in the data collection.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The statistical data analysis is described in great detail. This involves the analytical approach, descriptive statistics and hypothesized models.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
There are some minor issues related to the transparency related to the data collection (How was the preschool staff briefed on the questionnaires? etc.) and

information on sample (how many children received formal special support?). However, the questionnaire used for data collection was described in great detail along with reliability tests of the subscales. The analysis was also very extensively described.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
However, this is not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors appear to have reported on the data available. However, the fact that the variables were all measured by different child care staff (i.e. children's engagement, externalized behaviour difficulties and social interaction) can mean that there is a bias in data collection.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The project was approved by the ethics committee in Linköping in Sweden. The ethical procedure was described in detail in p. 1653.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
On the positive side: The researchers used well-established tests for measuring children's engagement, externalized behaviour difficulties and social interaction. One can criticize that the variables were all measured by child care staff i.e. children's engagement, externalized behaviour difficulties and social interaction. Thus, the variables are influenced by the subjective perspective of the particular staff member who was also involved with the child on a day to day basis. The perspective of the staff members of the child can potentially influence how they interact with the child and how that child interacts with other adults and children. Moreover, different staff members rated the children.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The researchers have used standardized tests and have also investigated the reliability and validity of some of the tests e.g. they claim that the validity and reliability of the SDQ is "good" by referring to research p. 1654. The authors have provided details so that the test can be found. The authors have however not

addressed the bias related to the fact that the ratings are based on child care staff ratings.

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The data analysis is described in great detail (p. 1655-1658) and even some of the mathematical equations involved in the calculations were provided e.g. in p. 1656.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
On the positive side: The researchers used well-established tests for measuring children's engagement, externalized behaviour difficulties and social interaction. The authors claim that the validity and reliability of these tests were good. One can criticize that the variables were all measured by child care staff i.e. children's engagement, externalized behaviour difficulties and social interaction. Thus, the variables are influenced by the subjective perspective of the particular staff member who was also involved with the child on a day to day basis. Thus, the day to day involvement with the child can influence the answers of the staff. Moreover, different staff members rated the children. Alternatively the researchers could have made inter-rater tests between the child care staff ratings of children e.g. testing if there was consistency between different staff ratings of individual children.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
Reviewer 1 has not found that the authors have addressed this issue.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The authors are cautious in their conclusions and do not overinterpret their results.

ID 29705477: Skantz Åberg (2016)

Skantz Åberg E, Lantz-Andersson A, and Pramling N. 2016. "I think it should be a little kind of exciting" : A technology-mediated story-making activity in early childhood education. In *Understanding digital technologies and young children: An international perspective* , edited by S Garvis, and N Lemon Eds, 74-91. London: Routledge.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
October 2, 2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)

- Description
- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
 - Case study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
The data material consists of video-recorded observations.
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
Children aged 6 years.
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
One teacher.
 - Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
The empirical example provided in this case study includes two six-year-old girls.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)

- Teaching and learning
- Technology and ICT
- B2: Main educational feature(s)? (multiple coding allowed)
 - Content
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
- B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
Both the theoretical framework of the study and previous research on early childhood literacy are described (see p. 74-77). However, the authors could with advantage have stated whether or not the collected data stem from a larger research project.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - No, please justify assessment
The aim of the study is not completely evident, and no explicit research question is posed though the authors refer to "our research question" on page 78. However, the authors state that "The study scrutinises the interactions of two six-year-old girls as they create a story together using a digital story-making application based on images. Taking the children's collaborative activities as the starting point, the study analyses the nature of the emerging activity when six-year-olds are instructed to narrate with digital technologies. We have a particular focus on what structuring resources (Lave, 1988) are utilised by the children." (p. 75). Further, it is stated that "The analysis aims to illuminate what structuring resources are utilised by the children in taking on the task given in the followed activity. A tool-mediated activity is multimodal in nature; therefore the interactional and semiotic modes the children employ to create a digital story have been the focal point of the analysis for understanding how they engage with the task." (p. 78)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Yes and no. It is stated that data were collected in a school located in a middle-

class area outside a small town, with mainly Swedish native speakers, and that the choice of school was made on the basis of its involvement in a municipal writing project - learning how to read through writing with digital technology. Thus, the participating children were used to handling computers and some software applications. Further, it is stated that two girls' story-making activity was selected for analysis in this study. These girls were selected from a sample of 16 participating six-year-old children enrolled in a preschool class. According to the authors, the reason for choosing one particular session of story-making was that it serves as an example of how all the observed activities more generally were conducted. Finally, it is stated that the participating preschool teacher was trained in handling the technologies used (see p. 78). However, it is assessed that the authors could have provided more detailed information on the sampling strategies / criteria and the participating children and teacher.

- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment

Reviewer 2: The study lacks detailed information on how data was collected and, therefore, it is assessed that the method of data collection is not described in sufficient detail. It is merely stated that the data material consists of video-recorded observations of story-making activities: "The data was generated during two occasions in April and June 2012 and during three occasions in February and March 2013. The selected activity for this study was filmed with two cameras, one directed towards the screen and the other towards the faces. This story-making activity lasted approximately 35 minutes, which was the average amount of time for the sessions." (p. 78) However, it is not stated how many sessions the total data material consisted of, and no observational guideline is given. (Reviewer 1: You are right, but how necessary is this regarding this case study presented here? Would it increase data quality?) Reviewer 1: One should possibly mention positive that there is quite some information about the data collection, even if there are the lacks you are emphasizing.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - No, please justify assessment

Reviewer 2: Overall, no. The theoretical frames of the analysis are described at page 76-77. The authors used Interaction Analysis (Jordan & Henderson, 1995) to investigate both verbal and non-verbal communication in the selected story-making activity in relation to the software used. Further, it is stated that the authors used certain transcription conventions of Conversation Analysis (CA) (p. 78). As such, the conceptual framework of the study is well described but the authors do not give an adequate description of analytical procedures, and thus it is unclear how the empirical data were coded. (Reviewer 1: But doesn't this to

some degree come forward through the presentation and interpretation of the empirical material?) Therefore, it is assessed that the transparency related to data analysis could be better, seeing that the details of the analysis processes are unclear, and the authors do not make their selection of the empirical example entirely transparent. It is merely stated that "it serves as an example of how all the observed activities more generally were conducted." (p. 78) Reviewer 1: Again, one could mention that there is quite some information about the analysis.

- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - No, please justify assessment
Reviewer 2: Overall, no. (Some of) the methodological aspects of the study are not adequately described, i.e. the participants of the study, the data collection method and the data analysis procedures are not appropriately accounted for. The selected empirical example (one session) is described. However, it is assessed that the authors should have explained in greater detail how and why only this single example was selected from the total data material and how this example is representative of the total data material. Reviewer 1: I agree with the last one, but I am not so negative when it comes to the presentation and analysis of the cases chosen.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
No explicit research question is posed and, therefore, this is somewhat difficult to assess. In this book chapter the authors present only one selected empirical example drawn from a larger data material with the purpose of "scrutinising the interactions of two six-year-old girls as they create a story together using a digital story-making application based on images." (p. 75) However, it is not stated exactly how and why this single session has been selected and how this particular session constitute "one example of a literacy event where narrative is used in education as a means for children learning how to read and write." (p. 76) In other words, the presented analysis and conclusions might well be selective and more concerned with the agenda of the authors than the real situations.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
On page 78 it is stated that "The research adheres to the ethical guidelines of the Swedish Research Council for protecting the rights of the participating children. Before conducting the observations the parents were informed about the purpose

of the study and gave their written consent. To acknowledge the children's voluntary participation, they were informed about their rights to abort participation at any time, if they wished, during recording. To ensure the anonymity of the children, their names have been changed."

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - No, please justify assessment
Reviewer 2: The research design could have been okay but because of lacking information on data collection and data analysis, it is difficult to assess. However, one could argue that the analysis of a single session (with two girls) deriving from a larger data material is not sufficient to address the aim of the study. Reviewer 1: I think this argumentation is maybe somewhat misleading? Shouldn't the main argument be that there is no research question.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Data collection procedures are not described in detail, nor is it stated how many (of the three) authors collected data for the present study. In order to raise the reliability of the data collection the authors could with advantage have elaborated and reflected upon the methodological concerns of the data collection and material.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
Reviewer 2: The transparency related to data analysis procedures is low and, therefore, it is unclear how data have been analysed. It is merely stated that the authors used Interaction Analysis to investigate both verbal and non-verbal communication in the selected story-making activity in relation to the software used, and that the authors used certain transcription conventions of Conversation Analysis (CA) (p. 78). The study provides no information on how many (of the three) authors were involved in the analysis of the collected data. The authors do not mention inter-rater agreement or cross-checking of interpretations which could ensure the validity of the data analysis. Moreover, considerations about the limitations of the study findings should have been provided. For instance, the authors should have discussed the limitations of including only one empirical example (with two girls) in the analysis, which calls for being cautious in drawing conclusions based on the study findings. Reviewer 1: However, the detailed presentation of "extracts" and their discussion give some indication of reliability/trustworthiness.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - Not at all, please justify assessment
Reviewer 2: The sample for this case study (two girls) seems very limited, even if the intention merely is "to illuminate what structuring resources are utilised by the children." (p. 78). It makes for a very particular account where the risk of in some way over-interpreting these two girls' interaction as supporting specific theoretical assumptions seems rather high. Reviewer 1: Isn't this a bit strict? No generalizability is intended. So, in a case study, what are the potential sources of error/biases?
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The selected material is well presented and interpreted. As long as the findings and the discussion are related to the empirical material presented, I do not disagree (positive: I agree with the authors) Reviewer 2: However, the conclusions are based on a very limited empirical material, and are thus rather particular.

ID 27924186: Skjæveland, (2016). Leing av læring i barnehagen -nasjonale retningsl

Skjæveland Y. 2016. Leing av læring i barnehagen -nasjonale retningslinjer og lokale fortolkingar. In *Barnehagen som læringsarena: Mellom styring og ledelse*, edited by Moen K H, Gotvassli K Å, and Granrusten P T, . . .

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
13/6-2017
 - A2: Type of publication (only one coding allowed)
 - Book chapter
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
This study is part of an anthology: Moen et al (2016). Barnehagen som læringsarena: Mellom styring og ledelse. Oslo: Universitetsforlaget
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
Norwegian Research Council (Norges Forskningsråd) p. 24
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Document study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Official documents such as laws, regulations and programs
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Other, please specify
How does the kindergarten interpret its guidelines and frameworks for learning in the kindergarten? (Korleis fortolkar barnehagen rammeplanen sine retningslinjer og rammer for leiing av læring i barnehagen?, p. 168). In other words: How is the national plan (rammeplan) interpreted in the different annual plans (årsplaner)? The main data of the study was annual plans (årsplaner) made locally in each kindergarten in three different municipalities. Part of the data material of the study was the national framework plan (Rammeplanen)
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Other, please specify
How does the kindergarten interpret its guidelines and frameworks for learning in the kindergarten? (Korleis fortolkar barnehagen rammeplanen sine retningslinjer og rammer for leiing av læring i barnehagen? p. 168) In other words: How is the national plan (rammeplan) interpreted in the different annual plans (årsplaner)? The main data of the study was annual plans (årsplaner) made locally in each kindergarten in three different municipalities. Part of the data material of the study was the national framework plan (Rammeplanen)
- A15: In cases where children inform the study, which age groups are included?

- Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Curriculum
 - Policy
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Working with control documents
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - Management and organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
 - The institution in an economic and political perspective
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The theoretical and practical background of the study is clearly outlined.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The research question is clearly outlined in p. 168. Moreover, the three subquestions are presented and explained. This is coherently and clearly described. How does the kindergarten interpret its guidelines and frameworks for learning in the kindergarten? (Korleis fortolkar barnehagen rammeplanen sine retningslinjer og rammer for leing av læring i barnehagen?, p. 168) In other words: How is the national plan (rammeplan) interpreted in the different annual plans (årsplaner)?

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
In p. 172 the data sample of the study was described. This involved the number of annual plans (årsplaner) from kindergartens (64 annual plans from 64 kindergartens) and the inclusion criteria. The plans were included from 30 kindergartens in two large municipalities (bykommuner) and four kindergartens in one small municipality. Roughly half of the kindergartens were private and the other half public.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - No, please justify assessment
The data material involved annual plans from 64 kindergartens. Details of the data material were outlined (data sample) in p. 172. However, it is unclear how the data material was collected practically e.g. did the researcher contact the kindergartens to ask for the annual plan? Did some kindergartens not return an annual plan although it was requested? How many (frafald)? These questions are relevant because the data material may include material from mainly very-well functioning and well-organized kindergartens. It is thus uncertain if the study had a selection bias.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Overall the steps of the data analysis were clear. The theoretical basis of the analysis (translation theory) was described in p. 170-171. Moreover, the author has outlined how the annual plans (årsplaner) were analysed in relation to the framework plan (rammeplanen). It seemed that only the author analysed the data. But this is uncertain, since it is not clearly stated in the chapter.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, the study is clearly outlined and easy to follow. However, there are certain aspects that Reviewer 1 would have liked to have included e.g. how many kindergartens did not return an annual plan? How many researchers were involved in the data analysis?
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)

- Yes, please justify assessment
The author has covered the areas that he set out to investigate in the research question.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author has not specified following ethical practices. However, the annual plan (årsplan) which was the main data material does not really require ethical considerations. The author has not informed the reader of the names of the municipalities that were included, nor the names of the kindergartens. Thus, anonymity of the participating kindergartens was ensured.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The research question (how does the kindergarten interpret the frame plan (rammeplan) in its guidelines and frames (rammer) for leading learning in kindergarten?) is answered well by using document analysis i.e. analysing the data material from the annual plans (årsplan) in relation to the framework plan. The number of annual plans (from 64 kindergartens) from different kindergartens (public/private) seemed appropriate. But it could possibly have included more kindergartens from smaller municipalities: only 4 out of 64 kindergartens were from kindergartens in a small municipality. Moreover, it would be relevant to know how many kindergartens were excluded because the researcher could not get hold of the annual plan. This is relevant in relation to selection bias.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
The author has not directly addressed the issue of reliability and validity of the data collection. The author has outlined which data was collected and also its inclusion criteria p. 172. However, as outlined in C4 it is unclear how the data material was collected practically i.e. it is uncertain if the study has a selection bias (data material was collected from kindergartens who responded to the researcher's request of an annual plan).
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Mostly yes. The steps of the analysis have been outlined clearly both practically and theoretically. The author specifically mentions the frequency of specific types of traits in the analysed frame plans. The author has not directly outlined

measures to ensure repeatability and validity. The reliability could have been addressed e.g. by including at least two researchers who analysed and compared their results.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The study had a decent sample of 64 annual plans from 64 kindergartens. Reviewer 1 finds that the author of the study has not directly addressed the issue of ruling out errors or bias. In terms of the data collection there could have been a selection bias. As outlined in C4 it is uncertain if the study may have a selection bias because only the most well-organised kindergartens responded to the researcher's request. It would have been interesting to know if the kindergartens included in the study were a nationally representative sample of kindergartens. The study included very few kindergartens from a small municipality (4 out of 64). Would it have been relevant to include more in terms of having a representative sample? Issues in relation to the validity of the results could have been addressed in various manners e.g. by including a second person analysing the data, and comparing the results.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
Reviewer 2: But as mentioned in C12 the frequency of specific variations of frame plans is mentioned.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The findings of the study appear plausible. Moreover, the author has linked the findings of this study to other research findings.

ID 27843947: Skreland (2016). På mandager er det ikke lov med papirfly : en studie

Skreland Lisbeth Ljosdal. 2016. "På mandager er det ikke lov med papirfly : en studie av regler og yrkesutøvelse". , .

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
27.03.2017
 - A2: Type of publication (only one coding allowed)
 - Thesis/dissertation
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - One-to-one interview
 - Focus group interview
 - Report of diary (field notes)
 - Sound recording
 - Video
 - Other (please specify)
written notes on rules in the kindergarten which could include notes like "remember to wash your hands after handling nappies"
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A13: In studies with children, which age groups are covered?

- Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
 - Children 4 years
 - Children 5 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Health
Health and safety: fx. hygienic issues, fire regulations
 - Pedagogical practices
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Basic values and/or ethics
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Physical environment
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The theoretical and practical context of the study is described in great detail.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)

- Yes, please justify assessment
The aims of the study are clearly outlined in p. 4. The main research question is: How do rules influence the daycare staff's (barnehagelæreres) professional work (yrkesutøvelse)? 1) What rules exist in the kindergarten and what is the rationale for their existence? (hvilke regler finnes i barnehagen og hvordan begrunnes de?) 2) How are the rules expressed? (hvordan uttrykkes reglene?) 3) How do the rules influence the professional work of the staff in daycare in the relation between staff and children? (hvordan preger regler barnehagelæreres yrkesutøvelse i samhandling med barn og medarbeidere i barnehagen?)
- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The dissertation provides information on the interview procedure i.e. there was information on the participants p. 82-97. The inclusion/exclusion criteria for picking the three kindergartens were outlined in p. 74. The kindergartens had to be ordinary kindergartens and not part of a special approach e.g. Reggio Emilia. There were details on the number of children in the kindergarten, the age of the participating adults and children (as a group, not individual).
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The author has outlined the process of the interviews. However, Reviewer 1 has not found an interview protocol or details of the questions asked in the interviews. However, it was clear that the questions revolved around the rules in the kindergarten. There are considerations regarding the field notes. The author used a notebook in the kindergarten where she wrote down rules as she observed them. The author has also outlined the challenge of being an observer in a kindergarten i.e. that it is difficult not to be "wrapped up" in the situation that she was trying to observe "objectively" (becoming a responsible adult in the kindergarten that kids ask for help).
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The author has described in great detail how the analysis was conducted. In particular the author has provided details on the theory behind the analysis and what analytical approaches and steps that were carried out.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The transparency of the study was good. The dissertation has plenty of room for details, thus, the author has outlined many details. However, Reviewer 1 could not find details on the specific questions asked in the interviews.

- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This procedure is very rarely outlined in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The study is qualitative, thus, it is difficult to avoid selective reporting bias. The author has made considerations regarding being an "observer" that does not influence the data material by being present (This involved not helping children in the kindergarten that needed help etc) and regarding interpreting the data from her biased perspective, p. 74.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author has addressed the issue of ethics p. 91-96. Informed consent was obtained and anonymity was ensured. Moreover, details of age etc. were provided in relation to the group of adults and children. In this manner, details on the individual participants were avoided and anonymity was ensured.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The author attempted to explore the rules in kindergartens and how they were executed. The author has carried out a qualitative study which is a relevant explorative approach to answer the research question. The author has carried out interviews with kindergarten teachers (and informal interviews with kindergarten assistants), carried out field notes while observing practice and collected "posters outlining rules" (posters with recommendations like "remember to wash your hands"). This data material seems a relevant way to explore the research question.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The author has collected data from both interviews, field notes and posters with rules (posterd with recommendations for practice e.g. "remember to wash your hands"). Thus, the results are based on a wide variety of data material. The author has outlined in great detail how the data collection was carried out. The author did not however seem to use a structured approach (interview protocol, protocol for field notes).

- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The author has consulted her participants after the initial interview/field notes to verify the meaning. The author was the only person analyzing the data, and the author has not commented on the pitfalls of this.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The author has considered the fact that she is "wrapped up" in the situation as a researcher in the kindergarten, and she tried not to be involved with the children like an ordinary member of staff. The author had considered the validity of the study by consulting participants after data collection to verify the meaning of what they said. The author is the only person analysing the data. She does not take measures to reduce this bias in the analysis by having other researchers analysing the data and comparing the results.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to other groups with the similar characteristics
The author has not directly addressed the issue of generalizability. But she clearly states in p. 248 that the results of the study contribute to the understanding of kindergarten practice and that the results are relevant for kindergarten teachers.
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
The author is generally cautious in her conclusions. She has included many considerations in relation to the findings. In addition she has related the findings to previous research.

ID 27440641: Slettner, (2016)

Slettner Sigrun, and Gjems Liv. 2016. "Litterasitetsfremmende samtaler i barnehagen". *Nordisk Barnehageforskning* 12(2):1-16.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
Review begun on 18th of September, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - Norwegian
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Ethnography
 - Observation study
 - Longitudinal study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years
 - Children 4 years
 - Children 5 years
 - Children 6 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 3 years

- Children 4 years
- Children 5 years
- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Pedagogical practices
 - Other, please specify
Language
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - Not applicable
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The researchers relate the study to other studies within the field and they draw on different theoretical perspectives on early literacy (in Norwegian: tidlig litterasitet). There is no information given on research funding.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The aim of the study as well as the relevance of it is presented. The aim is to examine how early literacy can be supported in different conversations between a preschool teacher and children.

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
The preschool is described adequately when it comes to the size of it, but the selection of it is not accounted for, nor is the preschool teacher participating in it.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
This study is based on video-recordings. Even though it is not argued why exactly this method has been chosen, the researchers have fully described how the video-recording were carried out. The researchers have addressed the potential influence of their presence on children. Furthermore it is clear what they emphasised during the data collection.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
First of all, the chosen data for the analysis have been discussed in researchgroups (though it is not clear how many researchgroups, the total number of participants, and how exactly those have been carried out) to strengthen the interpretations and the categorisations of the data. Besides, the researchers explain how the video-recordings were transcribed. It is presented what the aim is in the analysis and how the analysis will be carried out. Furthermore the researchers introduce the theory used and how it is being applied in the analysis. The analytical attention is as well presented.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The aim and the context are clear and the theoretical foundations are clarified. The information on research methods and analytical procedures are adequate. The chosen data for the analysis are argued and it is described how it was selected.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
No such statement.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors answer the research question presented. The process to answering the research question is clarified and justified. Besides, the researchers reflect on their role during the data collection and the analysis.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)

- No, please justify assessment
The researchers asked permission to collect data from NSD (Norwegian center for research data) and all the parents were given a blanketform for written consent. All the participants were informed about that they could leave the study at any time. Furthermore the researchers are aware of their positions in the study e.g. the researchers were in the preschool with the children and recording with the video camera in their hands. The aim was to affect the interaction between the preschool teacher and the children as little as possible by explaining the aim of them being there when the children approached them. The intention was not to ignore the children nor starting a conversation. Though it is not discussed if other strategies were possible to affect as little as possible.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The choice of research design per se seems appropriate in relation to the aim of this study even though the reason for choosing this particular method is not addressed.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
Yes and no. The researchers have addressed the potential influence of their presence on children during the video recording and how to reduce their influence. Overall the methodological procedures are described adequately. However, the relationship between the researchers and the preschool teacher has not been considered. Furthermore there is no information on how the sample was identified and recruited nor reflections on the size of the sample.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
As stated previously, the chosen data for the analysis have been discussed in research groups to strengthen the interpretations and the categorisations of the data. Analytical attention is provided as well as the strategy for the analysis.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The research design and the chosen methods are meaningful compared to the aim of the study. Even though it is not stated how the research groups were carried out

regarding discussions about selected data for the analysis, it strengthens the validity of the findings in the analysis.

- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study

- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: No difference in conclusions per se. Sufficient data/descriptions are presented to support the findings in the analysis. The focus and the aim in the study are clear, and selected data for presentation have been discussed in research groups to strengthen the interpretations and the categorisations of the data. Reviewer 2: No. The study is presented with adequate transparency and the findings and conclusions seem sound and relevant in light of the results presented. The study seems trustworthy.

ID 27988686: Sundqvist (2016)

Sundqvist Pernilla, and Nilsson Tor. 2016. "Technology education in preschool: providing opportunities for children to use artifacts and to create". *International Journal of Technology and Design Education*.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
23/8-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Not stated
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - View study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Questionnaire
 - *Open-ended questions*
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
- A13: In studies with children, which age groups are covered?
 - Not applicable
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
- A15: In cases where children inform the study, which age groups are included?
 - Not applicable
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Curriculum
 - Technology and ICT
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content

- Other, please specify
Technology
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The background of the study is clearly outlined. The authors have given an extensive description of the Swedish preschool, research on technology and engineering education in early education and technology in regulatory and supportive documents.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - No, please justify assessment
The authors have not spent much space on presenting the research question of the study. The authors have presented the research question in the abstract: "What do preschool staff members include as elements of technology education in preschool?". The research question could have been repeated throughout the report (e.g. before the section "method" p. 7 or/ and at the end of the section "the data production and participants" p.8) to create a better flow so the reader did not have to refer back to the research question in the abstract. In addition, the research question could have been explained in more detail. It was merely mentioned in the abstract.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
There is very detailed information on the sample. The questionnaire was sent to 10% of the preschools in the investigated municipality. The sample included preschool teachers and daycare attendants. The total sample size was 102. The authors have specified the distribution of gender, preschool teachers/ daycare attendants and age. Moreover, the authors have given information on the level of training in technology of the respondents.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The authors have clearly presented the three open-ended research questions (p. 8). Moreover, the authors have explained how the questionnaire was distributed.

It was distributed mainly online but hard copies were also given to those who requested it. The authors did not specify how the questions were generated, however, since there was no link to previous research it is most likely that the authors themselves have "constructed" the questions. They conducted a pilot of the questionnaire, thus, one may argue that this ensured some level of quality of the questionnaire.

- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors have clearly described the analysis (p. 8). This includes six steps of analysis which were carried out. The first four steps were conducted by the first author only and the two final steps were conducted by both authors. The respondent's answers could be placed in more than one category.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
The transparency of the study is very good. Reviewer 1 can think of no apparent missing information. The authors gave detailed information on the sample, data collection and analysis. Moreover, the authors have also outlined shortcomings of the study. The authors could have outlined the purpose of the study in more detail, but this is a minor issue.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in this type of qualitative research
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors have taken measures to avoid selective reporting bias: they have independently categorized the answers of the respondents. Thus, the results are not just dependent on the evaluation of one author. The inter-rater reliability between the two authors was more than 83%, thus, there was strong agreement on the results among the two authors.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The authors state that the study was conducted in line with ethical guidelines outlined by the Swedish Research Council (p. 10). In practice this meant that respondents were informed about their right to withdraw, that they would be anonymous and that their participation was optional. This information was given both verbally and via a letter.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)

- No, please justify assessment
The research design of using open-ended questions in a questionnaire to address the research question may not be the best to achieve high quality qualitative data. Indeed the authors themselves point out that some of the respondents' answers were unspecific. The authors have given examples of how this provided a challenge for the analysis (p. 9). Reviewer 1 believed that better quality data would have been achieved by making interviews. The authors argue that they used open-ended questions and not interviews to get a larger and more representative sample. Although this argument is valid, Reviewer 1 finds that the authors could have achieved a better quality data and a fairly large sample by making group interviews.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Somewhat. It would be possible to replicate the study because the authors have given full detail on the questions and how the data was collected. In terms of the validity of the data or more specifically the quality of the data, the study is not very strong. Reviewer 1 finds that the quality of the data collected could have been improved radically by making group interviews instead of open-ended questionnaires which yielded many superficial and unspecific answers. Some of the categories seem to suffer from the fact that the respondents gave very unspecific answers e.g. problem solving, experiments, and technique/ motor skills. On a positive note, the authors have acknowledged and made visible the fact that respondents were giving superficial answers. Moreover, they have presented an argument explaining why they were using this specific research design i.e. they wanted a large and representative sample. Moreover, they have taken some measures to ensure that the questionnaire was of ok quality i.e. they have piloted the questionnaire before using it. Reviewer 1 does however think that a large proportion of the data was of bad quality and hence the results suffer as a consequence.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The analysis of the study was very well described (p. 8). Thus, the steps of the analysis would be possible to replicate. The authors have also taken measures to ensure that the two authors independently arrived at the same results. The inter-rater reliability was more than 83%. Thus, the validity of the findings was addressed.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The authors have taken many measures to ensure a good quality study e.g. they have made a pilot of the open-ended questionnaire, they have made the steps of the procedures and critical points very clear (transparency), they have conducted inter-rater reliability. However, Reviewer 1 is critical of the overall research design (open-ended questionnaire) which does not provide the best quality data.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - Yes, the study results are generalizable to other groups with the similar characteristics
The authors claim that the study is generalizable to the preschool staff in the municipality (p. 19).
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The authors are cautious in their conclusion. Moreover, the results are discussed in relation to previous research. Reviewer 2: The findings of the study are clearly stated and discussed in relation to the original research question.

ID 27392557: van Bommel (2016)

Bommel Jorryt van, and Palmér Hanna. 2016. "Young children exploring probability : with focus on their documentations". *Nordisk matematikdidaktikk* 21(4):95-114.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
March 21, 2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - No, the data used in this study are not part of another study (or no information provided)
Reviewer 1: but just a little part of the entire empirical material is presented/used in this article.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description
The purpose of the present study is to explore how children in preschool class use documentation when solving a task about probability, and how they reflect on probability.

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Not stated

- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Sweden

- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
Reviewer 1: But in presenting the results there are some qualitative data used (see Table 1, 104) This should be mentioned.

- A10: What is the design of the study? (multiple coding allowed)
 - Case study
The present study is a qualitative case study exploring the ways in which children in preschool class use non-guided documentation when working with a problem-solving task about probability. Reviewer 1: Possibly we should also mention that the study is understood as an “intervention” according to the authors, within educational design research?

- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation

 - One-to-one interview
The children were also interviewed before and after the intervention.
 - Report of diary (field notes)
Children's reflections were noted during the lesson, by writing, and where permission from the guardians was given, audiotaped.
 - Collection of data from day-care (minutes of meeting, calendar etc.)
All written documentation from the children was collected.
 - Sound recording

- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 6 years

- A13: In studies with children, which age groups are covered?
 - Age 3-6
Children in preschool class (i.e. children aged 6)

- A14: Who informs the study? (multiple coding allowed)

- Children 6 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
Children in preschool class (i.e. children aged 6)
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
The main topic of the present study is mathematics education in preschool class.
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
The main topic of the present study is mathematics education in preschool class.
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The purpose of the present study is to explore how children in preschool class use documentation when solving a task about probability, and how they reflect on probability. (see p. 95)
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - No, please justify assessment
Sample and sampling strategy is not described in sufficient detail. It is stated that "eight preschool classes (a total of around 150 children) were part of the overall intervention. These preschools were selected based on the mathematical interest of the teachers at the schools. According to these teachers, they had not worked with problem-solving or with probability in mathematics in their preschool classes before. Four of these preschool classes from two different schools, with a total of 50 children, took part in the problem-solving lesson reported here." (p. 99)
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)

- No, please justify assessment
There is some information about data collection but there are also significant lacks in the description. The probability lesson is described in detail at page 101-102. It is stated that one of the researchers taught the lesson in order to enable a constant factor regarding the design requirements of the intervention in each of the four classes. However, the study lacks detailed information on how data was collected. For instance, no description of the data collection procedure (e.g. interview protocol and observational guidelines) is provided. On page 102 it is merely stated that "Children's reflections were noted during the lesson, by writing, and where permission from the guardians was given, audiotaped. All written documentation from the children was collected and then analysed." And on page 95 it is stated that "The children were also interviewed before and after the intervention".
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The theoretical framework of the analysis is presented at page 99. Moreover, it is stated that "The non-guided documentation was analysed using emerging categories by looking for patterns in the documentations. Differences and similarities within the diversity in documentations were looked for. The categories emerged in two phases: first, the documentation was divided into chronological and non-chronological strategies; secondly it was further divided based on the representations used." (p. 102)
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - Yes, please justify assessment
Overall, yes.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Ethical issues are not discussed by the authors, however it is stated that "the ethical regulations for research provided by the Swedish Research Council (2002) were followed, where both guardians and children approved the participation. The children were given verbal information about the intervention and the interest of the researchers. The children's guardians were given written information about

the study and approved their children's participation in line with the ethical guidelines." (p. 99)

- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
Yes, to some extent.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Reviewer 2: The authors provide no information on interview and observational guidelines. It is merely stated that interviews were conducted with the children before and after the intervention, and that the children's reflections were noted during the lesson, by writing, and where permission from the guardians was given, audiotaped. All written documentation from the children was collected and then analysed. Reviewer 1: May be it should be mentioned that educational design research is focusing on change and continuous adjustments and that this will include a particular understanding of reliability? I also think that the way of documentation is supporting the trustworthiness of the study.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
Triangulation across data sources is regarded as a plus. Throughout the analysis examples of the children's documentations are presented to illustrate the authors' interpretations which are also regarded as a plus. Also, the theoretical approach seems to be well suited to examine the data. Theories and previous research findings are used to reflect upon the findings. However, the authors could have described the participating children and schools in greater detail, and they should also have accounted for the limitations of the data collection.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)

- No, please justify assessment

The presentation of the study and the explicit presentation of the results as well as an appropriate theoretical contextualization of the study. New understandings are provided. Sufficient research quality despite some lacks of information.

ID 27434021: Zachrisen, (2016)

Zachrisen B. 2016. "The Contribution of Different Patterns of Teachers' Interactions to Young Children's Experiences of Democratic Values During Play". *International Journal of Early Childhood* 48:179–192.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
20.03.2016
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The study is part of a Nordic project on values education in ECEC settings and present some results based on the Norwegian research material. The main research project is called "Values education in Nordic preschools: basis of education for tomorrow".
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Description

- A7: Do authors report how the study was funded? (multiple coding allowed)
 - Research council/research foundation, please state the name of the funder
NordForsk
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is qualitative
- A10: What is the design of the study? (multiple coding allowed)
 - Observation study
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - Observation
 - Video
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
Children ages 1 1/2 to 3 years.
 - Children 2 years
 - Children 3 years
- A13: In studies with children, which age groups are covered?
 - Age 0-2
Children ages 1 1/2 to 3 years.
- A14: Who informs the study? (multiple coding allowed)
 - Educational staff: Practitioner
 - Children 1 year
Children ages 1 1/2 to 3 years.
 - Children 2 years

- Children 3 years
- A15: In cases where children inform the study, which age groups are included?
 - Age 0-2
Children ages 1 1/2 to 3 years.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
 - Pedagogical practices
 - Other, please specify
Democratic values
 - B2: Main educational feature(s)? (multiple coding allowed)
 - Content
 - Basic values and/or ethics
 - B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Relation and communication
 - Learning organization
 - Social system
 - B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study involves an introduction, theoretical background and previous research. Thus, the context of the study is adequately described.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
*The aim of the study is clearly outlined in the introduction of the study:
"Developing a sense of belonging and experiences about the value of community are important democratic values that children may learn during play in preschool. Through the different ways that teachers' interact with children during play,*

children can learn about democratic values. This study is part of a Nordic project on values education in early childhood education and care settings and data from this project are used in the analyses", p. 179. The research question of the study was: "What connection exists between different interaction patterns and the communication of democratic values in play situations?", p. 183.

- C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The following information was available about the sample: The sample was recruited from 7 preschools (and included one department in each preschool). The children were between 1 1/2 and 3 years old. It is however unclear how the seven preschools were recruited.
- C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The method is described in detail in p. 183-184. It is clear that other researchers than the author filmed the data material. The full data included 98 hours of video observations recorded over a period of three semesters.
- C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The author writes that she selected 37 video sequences from 98 hours of video recordings based on them including play situations. There could possibly have been a bit more detail on this selection process. There is a detailed description of the analytical framework p. 184-185. The analysis involved the author analyzing the material in three steps.
- C6: Is the study reported with sufficient transparency? (only one coding allowed)
 - No, please justify assessment
The process around selecting the specific 37 video sequences out of 98 hours of video is not entirely transparent. The author writes that they were selected because they involved play situations. However it is unclear if more than 37 play situations occurred during the 98 hours of video observation? Or if the author simply selected 37 play situations from the 98 hours of video observation? The author outlines the main framework of analysis (3 steps), however, the more practical side of the analysis is somewhat unclear. The author writes that the analysis was discussed with the researchers of the main research group. However, it is unclear how this discussion took place and how many people it involved.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
This is not common practice in most research.

- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - No, please justify assessment
The author claims to have consulted other researchers regarding the interpretation of the results. However, the discussion with other researchers is somewhat unclear. Reviewer 1 is not sure how many researchers it involved and how the discussions took place (email, regular discussion groups etc).
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
The author writes that ethical guidelines were followed e.g. informed consent was given (p. 183). The author did not collect the data so she is merely reporting on the data collection procedure of other researchers in the field. In other words, she is reporting on their reports. But there is no indication that they did not follow ethical guidelines.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
It was appropriate to investigate the research question using video recordings.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - No, please justify assessment
Reviewer 1 is unsure if the data collection involved systematic selection of 37 video sequences of play situations and whether there were no more than 37 video sequences of play situations in the 98 hours?
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - No, please justify assessment
The data analysis was carried out by the author. She outlines the framework for analysis but it is not entirely clear how the analysis was carried out in practice. Moreover, it is unclear to Reviewer 1 how the data results were discussed with peer reviewers as outlined earlier.
- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A little, please justify assessment
The author claims to have discussed the results with researchers who have carried out the filming but what this discussion actually involved is unclear.
- C14: Does the author address the generalizability of the study? (only one coding allowed)

- No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The authors are generally quite cautious in their interpretation of the results.

ID 27413588: Zambrana (2016)

Zambrana Imac M, Dearing Eric, Nærde Ane, and Zachrisson Henrik D. 2016. "Time in Early Childhood Education and Care and language competence in Norwegian four-year-old girls and boys". *European early childhood education research journal* 24(6):793-806.

Date: 12-09-2018

Guideline

- Section A
 - A1: Date of the review and names of the reviewers
 - Please enter the date of the review
13/3-2017
 - A2: Type of publication (only one coding allowed)
 - Journal article
 - A3: Please enter if the data used in this study is part of another study (only one coding allowed)
 - Yes, the data used in this study is part of another study (please specify)
The data is drawn from the longitudinal Behavioural Outlook Norwegian Developmental Study (BONDS). For a reference to the BONDS study, see the following: Nærde, Janson & Ogden (2014). BONDS (The Behaviour Outlook Norwegian Developmental Study): A Prospective Longitudinal Study of Early Development of Social Competence and Behaviour Problems. Oslo: The Norwegian Center for Child Behavioral Development.
 - A4: Does this study have a broader focus and this data extraction just focus on one component of the study? (only one coding allowed)
 - No, the whole study is the focus of this data extraction
 - A5: Publication language (only one coding allowed)
 - English
 - A6: What is the purpose of the study? (only one coding allowed)
 - Exploration of relationships
The study explores the relationship between time in early childhood education and care and language competence.
 - A7: Do authors report how the study was funded? (multiple coding allowed)

- Research council/research foundation, please state the name of the funder
The first and second authors are funded by the Research Council of Norway.
- A8: In which country or countries was the study carried out? (multiple coding allowed)
 - Norway
- A9: Is the study qualitative or quantitative? Or is it a mixed methods research? (only one coding allowed)
 - The study is quantitative
- A10: What is the design of the study? (multiple coding allowed)
 - Longitudinal study
 - Experiment with non-random allocation to groups (quasi-experiment)
The groups were allocated according to how long the children attended preschool.
- A11: Which methods were used to collect the data? (multiple coding allowed)
 - One-to-one interview
Interviews with parents.
 - Other (please specify)
Language tests
- A12: Which actors and their conditions are explored? (multiple coding allowed)
 - Children 4 years
- A13: In studies with children, which age groups are covered?
 - Age 3-6
children aged four.
- A14: Who informs the study? (multiple coding allowed)
 - Children 4 years
 - Parent
- A15: In cases where children inform the study, which age groups are included?
 - Age 3-6
children aged four.
- Section B
 - B1: Main topic(s)? (multiple coding allowed)
 - Teaching and learning
Literacy/language development

- B2: Main educational feature(s)? (multiple coding allowed)
 - Other, please specify
Literacy/language development
- B3: Social and institutional aspect(s)? (multiple coding allowed)
 - Learning organization
- B4: The institution in society (multiple coding allowed)
 - The institution in society
- Section C
 - C1: Is the context of the study adequately described? (only one coding allowed)
 - Yes, please justify assessment
The context of the study is adequately described: both the current practice is described (political context) and research related to perspectives on time in Early Childhood Education and Care (ECEC) is presented.
 - C2: Are the aims of the study clearly reported? (only one coding allowed)
 - Yes, please justify assessment
The purpose of the study is clearly outlined. The study investigates "whether there is a dose-response association between time in ECEC throughout early childhood and language competences at age four; and whether time in ECEC is particularly related to language competences in boys and girls", p. 796.
 - C3: Is there an adequate description of the sample used in the study and how the sample was identified and recruited? (only one coding allowed)
 - Yes, please justify assessment
The sample procedure was clearly outlined in p. 796. This includes how the sample was recruited, the time of recruitment, and dropout rates. The sample consisted of 1157 boys and girls.
 - C4: Is there an adequate description of the methods used in the study to collect data? (only one coding allowed)
 - Yes, please justify assessment
The authors have clearly outlined how the data was collected, e.g. the language test is clearly outlined (British Picture Vocabulary Scale), p. 796. It is also clear that much of the data collection is based on parental reports. There is a good level of detail.
 - C5: Is there an adequate description of data analysis? (only one coding allowed)
 - Yes, please justify assessment
There was an adequate description of data analysis. The analysis was specified in p. 797-799.
 - C6: Is the study reported with sufficient transparency? (only one coding allowed)

- Yes, please justify assessment
The study is reported with great transparency and detail. Moreover, it is written in a clear and concise language.
- C7: Do the authors explicitly state where the full, original data are stored? (only one coding allowed)
 - No, please justify assessment
However, this is also not common practice in research.
- C8: Do the authors avoid selective reporting bias? (only one coding allowed)
 - Yes, please justify assessment
The authors address the aim that they set out to begin with. Moreover, the authors are cautious in their conclusions. Also, selection bias was addressed by taking a three-step analytical approach, see p. 298 for details.
- C9: Do reviewers assess that there are any ethical concerns/problems about the way the study was conducted? (only one coding allowed)
 - No, please justify assessment
Children were assessed on a language test when four years old. Some may argue that informed consent is difficult to achieve from these young children, however, Reviewer 1 finds no particular ethical problems with this study. BONDS is approved by the Norwegian Social Science Data Services and the Regional Committee for Medical and Health Research Ethics, p. 796.
- C10: Was the choice of research design appropriate for addressing the research question(s) posed? (only one coding allowed)
 - Yes, please justify assessment
The research design is strong. It is a longitudinal design with a large number of children. Many variables were dependent on parental reports.
- C11: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data collection methods or tools? (only one coding allowed)
 - Yes, please justify assessment
The data collection would be possible to replicate because the author has clearly specified the variables and their levels. The study uses a standardized language test (Norwegian version of the British Picture Vocabulary Scale II) on a large sample. Many variables were dependent on parental reports.
- C12: Have sufficient attempts been made to establish the repeatability, reliability, validity or trustworthiness of data analysis? (only one coding allowed)
 - Yes, please justify assessment
The authors have made a number of analyses which have been clearly outlined. The authors e.g. provide age-adjusted results and propensity score weighted results. Validity has been addressed. Selection bias was addressed by taking a three-step analytical approach, see p. 298 for details.

- C13: To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? (only one coding allowed)
 - A lot, please justify assessment
The authors have considered a number of potentially confounding variables, e.g. maternal age and education of parents. The authors have presented results that have both been "adjusted for" and "not adjusted for" these confounding variables. They have also made age-adjusted results, i.e. some children were tested some months before and after their 4 year old birthday, and this was corrected for in the age adjusted results. Also selection bias was considered as outlined in C8.
- C14: Does the author address the generalizability of the study? (only one coding allowed)
 - No, the author does not address the generalizability of the study
- C15: In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? (only one coding allowed)
 - No, please justify assessment
Reviewer 1: The authors are generally quite cautious in their interpretation of the results.