

Economic sustainability in Swedish preschools

Preschool teachers and preschools as political-economic actors

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The aim of this article is to scrutinize education for sustainability (Efs) in Swedish preschools, and especially how preschool teachers have articulated their work with economic sustainability objectives in practice. In this study we used an action-research methodology, and six preschool teachers from three preschools participated in the study. The theoretical framework was guided by critical theory, which was also used as a conceptual tool to explore agency and shared understandings as different ways of dealing with economic sustainability. The findings demonstrated that at the beginning of the project the preschool teachers did not view economic sustainability as part of the preschool's objectives and activities, or the children's learning. Nevertheless, in the dialogues between preschool teachers and researchers it became clear that the preschool teachers worked with these issues daily in their routines and in children's activities and play.

Keywords: early childhood education, economic sustainability, economic sustainable development, preschool.

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Introduction

Since the 1990s, education for sustainability has been a tool in an international political effort to ensure a sustainable future. Education for sustainability refers to addressing the economic, social and environmental challenges and opportunities facing societies around the world (UNESCO 2014). Research has shown that, when talking about education for sustainability, preschool teachers seldom mention economic sustainability (Ärlemalm-Hagsér & Sundberg 2016) and that they struggle to handle the complexity and ambiguity of sustainability issues (Ärlemalm-Hagsér 2013, Hedefalk, Almqvist & Östman 2015). There is a great need for research on how preschool communities and specifically, preschool teachers are handling economic sustainability in their institutions as currently there is a significant gap here (Davis & Elliott 2014). Also, Farhana Borg (2017a & 2017b) stresses that, especially in early childhood education (ECE), economic sustainability and how children and teachers understand and handle issues concerning it needs to be further explored in research. This lack of knowledge has also been stressed in UNESCO's report *Shaping the future we want* (UNESCO 2014), which stated:

“Learning that supports children’s emerging awareness and understanding of economic sustainability is perhaps the least developed, or least recognized, in ECCE [Early Childhood Care and Education]. Yet, for most early childhood educators, parents and children, the day-to-day activities most significantly influencing sustainable development are at the level of consumption” (UNESCO 2014, p. 77).

In order for children to develop an understanding of economic sustainability, Elisabeth Näsman and Christina von Greber (2003) argue, economic concerns need to be part of preschool programs. These researchers have, however, only studied general economic issues in preschool, not economic sustainability. This article directs attention to early childhood education for sustainability (ECEfs) in Swedish preschools, and specifically aims to develop knowledge about preschool teachers’ understanding of economic sustainability. As well as, examine how they articulate their everyday preschool teaching and activities to support children’s awareness and understanding of economic sustainability. This was achieved by the preschool teachers participating together with researchers, to reflect on their everyday work in relation to economic sustainability as integral to an action-research project.

As the concept of “sustainability” is somewhat ambiguous and normative, and contains important theoretical (Jickling & Wals 2008)

and ideological tensions (Sandell & Öhman 2012), it is necessary to first clarify the concepts that underpin this study. In Sweden, the concept of education for sustainable development (ESD) is used in policy and politics, as well as in research (Öhman 2011). In this article we use the concepts “education for sustainability” (EfS) and “early childhood education for sustainability” (ECEfS) in line with a critical perspective that places economic, social and ecological sustainability in relation to issues of environmental sustainability, human equality and economic and social justice (Fraser 2009). Separating the three dimensions of sustainability, and discussing the economic part in particular, can be problematic, as all dimensions are closely interconnected with each other. Nevertheless, as we have argued above, it is important to understand how economic sustainability is understood as an objective in the preschool institution and program. Applying Söderbaum’s (2014 & 2017) understandings of economic sustainability, we also view individuals and organizations as political-economic actors.

The aim of the study was to develop knowledge about how preschool teachers reflect on and articulate their work in relation to their understanding of economic sustainability, and how they were handling this in their everyday teaching and program activities in relation to children’s emerging awareness and understanding of economic sustainability. The research questions were as follows: How do preschool teachers articulate economic sustainability in a preschool context? What everyday activities and teaching situations do they articulate in terms of economic sustainability? What hidden assumptions appeared in the empirical material when the preschool teachers articulated economic sustainability as an objective in preschool?

Preschoolers and education for sustainability: the Swedish context

Swedish preschools have a long tradition of working with social, economic, ecological and political sustainability issues (Årlemalm-Hagsér 2013, Dahlbeck & Tallberg Broman 2011). This can be seen in the pedagogical work that occurred during the formation of preschools in the mid-1850s, the contents of which included personal health, lifestyle issues, and individual competence, with children viewed as key actors shaping a better future society characterized by social stability, health, and economic progress (Dahlbeck 2012). As Johan Dahlbeck (2012) and also Johan Dahlbeck and Ingegerd Tallberg Broman (2011) state, children have been and still are seen as heralds of moral and ethical values for families and the community. Sustainability, one could argue,

is a core and pressing moral and ethical value of our time. Teaching for sustainability is also seen as an important part of the preschool's mission, apparent in the Ministry of Education and Research's clarification of subject content and pedagogical approaches in the preschool curriculum (The Ministry of Education and Research 2010).

A major challenge then is to educate future generations to understand and act based on the principle of sustainable development, i.e. aiming to achieve a development that meets needs without compromising opportunities for future generations to meet their needs. Preschool is a natural starting point for this work since the foundations for interests, valuations and knowledge are laid down in these early years /.../ Teaching for sustainable development is about holistically integrating environmental issues and also social and economic issues. Care for the environment and rehabilitation, natural resources, sustainable consumption, sustainable production, lifestyle issues addressing consumption and food, health, and the creation of a peaceful society are all examples of principles covered by the concept of teaching sustainable development. /.../ The challenge for the preschool teacher is to pick up on what occupies the child's thoughts and curiosity and to establish a link to current environmental issues and lifestyles (The Ministry of Education and Research 2010, p. 15).

Today, teaching for sustainability, which includes teaching about economic sustainability as a dimension, is not included in the Swedish Preschool Curriculum (The Swedish National Agency for Education 2016). However, in the proposal for a revised curriculum (The Swedish National Agency for Education 2018), teaching for sustainability is presented as one of the revisions proposed in the curriculum review guidance document.

Anette Sandberg, Anne Lillvist and Eva Ärlemalm-Hagsér (2018) argue that the idea of teaching in Swedish preschools is unprecedented and can be perceived as controversial by preschool staff and parents. One reason for this may be that the word "teaching" is often associated with more didactic traditional school education. In addition, preschool teachers may find it difficult to transfer this pedagogical construct to their own activities. Teaching in preschool lies at the intersection of the demands of society, the preschool's traditions, the educational activities, that is, content, pedagogies, and organization, and preschool childrens' competence. The teaching can be said to be the sum of these four aspects. Teaching about sustainability in preschool education can be significant for the foundation of lifelong learning. It is about shaping a basic understanding of the environment and society

already in preschool, and even concerns how sustainable activities and – in the long term – a sustainable society can be created by the joint efforts of children and adults working together, in the present and future.

Economic sustainability as an objective

As this study focused on economic sustainability, various aspects of economic sustainability need to be scrutinized. According to Peter Söderbaum (2014) sustainable development is the non-degradation of ecosystems and the natural resource base in each country and at a global level. As mentioned earlier, Söderbaum (2014) has distinguished between three interpretations of economic sustainability: (1) Business as usual – monetary profits and economic growth; (2) Modernization – recognizing the existence of serious social and environmental problems and being willing to modify the present political economic system to deal constructively with the problems; and, (3) Radical institutional change – in the present political economic system.

He points to a “political turn” in economics, where both individuals and organizations are to be understood as political-economic actors guided by their *ideological orientation and mission* within a democratic society. Söderbaum (2017) argues that “each individual and each organization is a potential and actual policy-maker, as suggested by the concepts ‘political economic person’ and ‘political economic organization’. All actors contribute to aggravate or improve the state of the environment (and other sustainability indicators in positional terms). Each actor has her rights and responsibilities in a democratic society” (p. 39).

How can this be connected with and interpreted in relation to the preschool? Both the individuals within the institution and the institution itself can be agents or, as Söderbaum (2017) puts it, ‘potential and actual policy-makers’ in the work with economic sustainability. Young children’s engagement has been recognized as a key element in promoting a life-long dispositions towards caring for the environment (Barratt Hacking, Barratt & Scott 2007), and taking part in developing equity and equality (Hägglund & Johansson 2015, Lee Hammond, Hesterman & Knaus 2015). Children are to be given the opportunity at preschool to participate in discussions and practical activities that concern their lives now and into the future (Borg 2017a & 2017b, Davis 2014).

The Swedish preschool has a long tradition of recycling and reusing materials and resources. Economic sustainability in preschool

covers everything from questions about sustainable use, recycling and reusing of materials and items, to questions about resource consumption and its consequences for the environment and for human living conditions. This is not only specific to the ECE programs in Sweden; Jan Georgeson (2018) also discusses the tradition of sustainable sourcing as an objective in early childhood practices in the UK.

Issues about financial management, money, saving and/or the need for financial prudence are also objectives related to economic sustainability that need to be handled in the Swedish preschool (Ärlemalm-Hagsér & Elliott 2017, Ärlemalm-Hagsér & Pramling Samuelsson 2018, Borg 2017a & 2017b). For example, Borg (2017a) interviewed 53 Swedish preschool children aged 5–6 years with regard to sustainability in economic terms, focusing on the use of money, the sharing of resources (candy) with friends, and sources of knowledge about economic issues. When it came to the use of money, most of the children used money for the consumption of goods (buying toys, candy, etc.), although some of the children wanted to save money to be able to buy more expensive things and to be rich. Some of the interviewed children wanted to donate money to the poor. In sharing resources, the children wanted to share their candy with friends, and they saw sharing as a social responsibility or as equitable behavior. Borg (2017b) also wrote an article about preschool children's knowledge of the economic situation for children worldwide. The results demonstrated that the children did have knowledge about the issue. However, there were some differences: children at eco-certified preschools seemed to have a deeper understanding of other children's economic situation in the world than those at non-eco-certified preschools. All the children had mostly received the knowledge from parents, media and observations of real-life situations, while some of the interviewed children stated that the teaching at preschool had increased their knowledge about these issues.

In another study, Aysel Korkmaz and Tulin Yildiz (2017) examined whether there were differences between the public and private eco-preschool groups in Turkey with regard to education for sustainability. They found that when the dimension of economic sustainability was examined, private preschools were found to be stronger. For example, private preschools often used less water and readily practiced using both sides of paper. Also, the study showed that preschool teachers in the private eco-preschool group were more knowledgeable about sustainability issues than their colleagues in the public preschools.

As stressed by the Ministry of Education and Research (2010), children in preschool can be encouraged and supported to critically examine consumption and lifestyle patterns. In practice, this can take

the form of children taking part in purchase decisions and discussing needs and wishes. Economic sustainability in a preschool context can mean supporting children's initiatives for various innovative projects focusing on financial prudence or on collective use and reuse together and with parents and the surrounding community (Odegard 2012).

The study

This study was part of a larger preschool action research project in which economic sustainability was one of several aspects investigated (economic sustainability, mathematics, and financial literacy).¹ In this article, we present findings from the economic sustainability aspect of the study. While it is problematic to separate the different parts of sustainability, in this study, we are doing this according to the gap of studies about economic sustainability. The research was conducted during autumn 2016 and spring 2017 and the empirical data consisted of transcribed dialogues between the preschool teachers and researchers. Ethical issues were considered in accordance with the guidelines of the Swedish Research Council (2016). The teachers received information about the proposed research ahead of time by e-mail, and at the first meeting face-to-face. They were informed about the aims, design, and methods of the study, as well as about confidentiality issues and the handling and use of data. It was emphasized that their participation in the study was voluntary and they provided informed consent to participate. In the action-research approach (Kemmis 2009) the preschool teachers and researchers worked together to investigate and develop their preschool practices.

In critical action research, the aim is to explore social realities in order to discover whether social or educational practices have such unsustainable consequences. It does so by opening communicative space (Kemmis and McTaggart 2005) in which people can reflect together on the character, conduct and consequences of their practices (Kemmis 2009, p. 471).

Six preschool teachers from three preschools (two teachers from each preschool) met four times with the researchers in meetings lasting 1.5 hours. At each meeting, the preschool teachers considered various topics relating to economic sustainability, mathematics, and financial literacy. These topics were selected from previous research with the aim of enabling us to examine the preschool teachers' understandings of economic sustainability as a learning objective in preschool. The participants considered their own practice, made observations about

how they worked, engaged in dialogues with their colleagues, and interviewed children in the groups of children at their preschools. All teacher meetings were recorded and transcribed, and comprised four meetings of 1.5 hours each, or altogether 6 hours of transcribed data.

At one of the meetings, the participating preschool teachers were asked to write about two critical events from each preschool group. In other words, they were to articulate teaching situations from their everyday experience in which they problematized activities in the unit with respect to economic sustainability, as well to describe how children talked about and enacted economic considerations in their play and other activities. The critical incident technique (CIT) method was used, and the preschool teachers accordingly were asked to describe *where* the activity or teaching situation occurred, *who* was present, *how* it started, *what* he or she did, and how it ended. The participants also described why they considered this activity or teaching situation to be a successful or less successful event. Our use of the critical incident method had two purposes. The first was to facilitate and stimulate discussion. This involved learning about and understanding the participants' opinions and providing opportunities for the preschool teachers to critically self-reflect and to also question the views of others. The second purpose was to give the researchers an opportunity to investigate and clarify several statements. This method has previously been successfully used in studies of how preschool teachers, teachers, and student teachers perceive certain concepts in their pedagogical practice (Johansson & Sandberg 2011).

The theoretical framework was guided by critical theory (Fraser 2009), acknowledging current social reality constructs and the fact that institutions (preschools in this case) have political, moral and ethical values embedded in their practices, and that these values were created in specific historical, social and cultural contexts (Dahlberg & Moss 2005), and further that both individuals and organizations are to be understood as political-economic actors (Söderbaum 2014 & 2017).

Analysis

Early in the analysis process we decided to treat the transcripts of the dialogues from the four meetings as a single corpus of material, and not to try to distinguish between the different preschools. The first step of the analysis process was to identify what patterns we could see in the transcripts from the dialogues, thus keeping our research questions in mind we repeatedly read the transcripts looking for patterns of similarity and difference.

In the second step we discussed the patterns that emerged in the material. Our analytical questions to the material were: Can these patterns be found in all transcripts, and what characterizes economic sustainability within these preschools? The purpose of this part of the analysis was to clarify hidden assumptions in the material (Alvesson & Sköldberg 2009) taking inspiration from the critical framework that institutions are constructed by their cultural, social and political history (Dahlberg & Moss 2005). The final step consisted of applying the results from the analysis to examine our theoretical framework, especially with regard to how individuals and organizations can be understood as political-economic actors (Söderbaum 2014 & 2017). Fraser's distinction between "affirmative" and "transformative" remedies was also employed as an analytical tool (Fraser 2009); affirmative remedies are understood as constructive actions that do not disturb underlying structures, while transformative remedies deconstruct underlying structures. We were especially interested in how the preschool teachers in their dialogues articulated everyday practices, their consciousness of the everyday organization and pedagogy, and whether, and if so how, they critically reflected on economic sustainability.

Findings

The presentation of the findings is structured as follows: preschool teachers' articulations of economic sustainability, working with economic sustainability in the organization, and working pedagogically with economic sustainability.

Preschool teachers' articulations of economic sustainability

Preschool teachers did not consider economic sustainability as a set of objectives to be part of their everyday preschool activities. In the dialogues it became clear that they formed part of an unseen curriculum. As the preschool teachers' articulated, their understandings of economic sustainability and how it was represented in the preschool activities, did change during the four successive dialogues.

We can now see that we work with these objectives [economic sustainability], but we never talked about them as pedagogical objectives before.

Their changes of understanding were developed, according to the preschool teachers, after they had reflected on their educational practices and discussed economic sustainability with their preschool colleagues along with conversations about what they discovered with the other participating preschool teachers in the study and the researchers.

Working with economic sustainability in the organization

At the three preschools taking part in the project, there was consistent rhetoric about how the service operated generally at an institutional level. This involved conserving resources; sorting, recycling, reusing; being careful when handling toys and materials; and, ensuring that all children could participate in all preschool activities despite differences in their families' economic situation.

Conserving resources

Working to conserve resources such as electricity and paper were objectives that all preschool teachers talked about. They also mentioned that natural materials were brought in from the outdoors as art materials and for play.

At our preschools, we are currently working towards getting a Green Flag. So this has been a big project across the board over the last year, probably one and a half years by now. We've talked with the children a lot about this, about sustainable development, that we can't waste resources, and how we can save materials and such. And it all starts with turning off the light when you leave the room. Just use one paper towel to dry your hands. What else? If you make a mistake when drawing on a piece of paper, just turn the paper over, or cut out the bit you don't want and use what's left. We don't just draw a line then throw it away. And using natural materials. We bring lots of things in. We bring in pinecones and rocks, and lots of things like that, and use them.

As some of the preschools that took part in the project were working with the Eco-Schools Program Green Flag or aimed to be certified by Green Flag, they were actively conserving resources. Several of the preschool teachers talked about reducing food waste and one of the preschools had taken part in a national food waste competition.

We participated in one of those competitions a while back. What was it, six months ago? Something like that. We had to weigh our food for a whole week to see how much the children threw away. And we won that competition.

The other preschool also worked to reduce food waste by different units at the preschool competing to see who could throw away the least amount of food during a four week period.

We spend four weeks, during which we have to weigh the food we throw away, to see how much it actually is. So we sort of compete internally to see which unit wins. Then the children become aware of how much we throw away.

Sorting, recycling and reusing

All the participating preschools established systems for sorting and recycling waste. It was clear from the preschools' reports that the children were involved in these activities and these influenced them significantly.

We do a lot of trash sorting. We have a large recycling room... where we take the children, and they know what they should throw out. So, it seems a matter of course for them to know where to put the items.

The preschool teachers also reused trash as art materials, and gave children opportunities to use the materials to construct anything they liked.

We collect milk container caps which we have in the art room and the building, everywhere in fact. So perhaps, things that are going to be thrown away, maybe you can save some parts, or we can make something else. The children are really good at that. Because "we can use that for this," so our children are like: no, we won't throw that out, but we'll do this with it instead, we can do this. And think that way on their own.

The preschool teachers said that children had lots of ideas about how to use the trash that they were collecting as art materials.

Being careful when handling toys and materials

Handling toys and materials carefully was a recurring topic that came up in discussions with the preschool teachers. Several of the teachers talked about being aware of the value of money and that things have a cost. A preschool teacher stated:

Taking care, that is, being aware of cost, and taking care of what you have – this is an important aspect for children to learn about.

Another preschool teacher described:

Taking care of stuff. It's all about thinking that everything, whatever you do, has a cost. Even food, the stuff we have around us, you could say. It comes from somewhere. You create awareness that it's not just "use and discard," but rather, a lot of sustainable development is about the fact that you should reuse stuff, and you can try to make your own stuff out of things.

Unsustainable ways of handling resources in the educational practices were challenged by the teachers, together with the children. For example, the preschool teachers articulated that they had discussions with the children about taking care of toys and other material in a sustainable way.

Being able to take part in all activities regardless of economic situation

A further aspect discussed was that all children must have the opportunity to take part in all activities without any additional cost to the families for such items as clothing, materials and equipment. One of the preschool teachers stated:

That it's a free preschool [means] we cannot require, that it's actually not allowed to require a Lucia² costume, or a helmet for sledding; we'll take care of it, if a family doesn't have them.

The preschools have boxes of clothing, materials and equipment that the children can borrow.

We've bought some Santa hats and Lucia gowns and that sort of thing. And glitter and so on, so that it's available if the children want it.

Another preschool teacher described how they tell parents:

If you have a helmet you can bring it along if you want to. Otherwise, there is one to borrow here. It's the same when we have a costume party and when we have Lucia, and so on. Then we say, we have it here, you don't need to go and buy anything.

Summary

At the beginning of the dialogues with the preschool teachers, they did not relate economic sustainability to their everyday practices or teaching. That these objectives were integral to their everyday practices – as an unseen curriculum – gradually became clear, and they gave examples of how the preschools and the teachers were organizing activities based on the resources and materials present in the preschool, and how these resources were being used economically and sustainably. There was also awareness of the different economic opportunities for children and their families, and the teachers strived to provide equal opportunities for all children attending the preschool. The topics that the preschool teachers articulated were related to both economic and social sustainability, and more specifically to social values including responsibility, equality and equal opportunity. The fact that, at an institutional level, there was an awareness of the value of materials and resources. Strategies had been developed to take this into account, as well as to ensure that all children had equal opportunities, was reinforced in the dialogues with the participating teachers.

Working pedagogically with economic sustainability

The preschool teachers gave many examples of how they worked with economic sustainability in their everyday routines and when guiding children's play. Often in the discussions with the children money was described as a limited resource.

Saving resources in everyday routines and play

After the discussions about what teaching activities that could be related to economic issues and economic sustainability, the preschool teachers concluded they worked across these topics both in recurring everyday routines and through the children's activities and play. They

also reported talking with the children about economic sustainability issues in an everyday context.

The examples described by the preschool teachers as recurring routines were linked to hand washing and food situations. The basic idea conveyed was being economical and not wasting resources. The preschools did not use cloth hand towels for hygiene reasons but all participating preschool teachers reported the problem of children taking too many paper towels – by accident or deliberately. One of the preschool teachers explains:

Lots of paper is wasted when the children dry their hands after visiting the toilet. Lots of paper ends up being shoved into the bins [by the cleaner], and we've spoken to the cleaner about it. When you try to take one piece, many come out with it. The teachers have talked about this consumption, that it's a waste of paper. Usually the children take one, dry their hands a bit, throw it away, and then take more.

The preschool teachers described working to reduce overconsumption of paper towels. This was done by suggesting strategies to the children, giving them specific examples, and talking to them about their own experiences.

The preschool teachers also discussed with the children how they could help minimize the food wastage. In the discussions, the preschool teachers stated that they taught children to serve themselves small portions.

We also talk about not throwing food away. So just take what you think you can eat, just take small portions instead, and we can save some costs there as well. Because if we throw out lots of food, then the cook has to buy even more. And that costs money, which could be used to buy toys instead, or materials... They [the children] took small portions, and went back several times instead. Because they did not want to lose their toy money. The children said to each other: "Take a little, taste it, and you shouldn't waste your food."

Other dilemmas about saving resources arose in children's play and activities. A preschool teacher reported the following:

We use a lot of paper when the children do drawing. That's not sustainable. We thought of making our own coloring books for them. We made copies, ordinary paper, bundled them and bound them all together. [Everyone got the same.] We explained beforehand why we were doing this. We talked

a bit about where paper comes from is it unlimited? The children's own thoughts. Some children knew that paper could be recycled... We've noticed that there's been a huge reduction in paper use. Not as much paper is being used, they're more careful, they're calmer and they sit and draw. And we've gotten them to understand that we can't waste paper.

This example generated a discussion in the group, and one of the other preschool teachers indicated that they have the same problem.

We've also had this problem, not to just draw a line on the paper. We've talked about where the paper comes from. We've introduced pencils and erasers. This is so that the children can erase any mistakes they make. They've acquired a new understanding of this business with paper. We watched a short film on YouTube about how paper is made. Where is paper found? It's in newspapers, books, when you draw. They found paper everywhere.

The belief among the preschool teachers was that saving resources and not creating waste were part of the everyday routines, and teachers offer children strategies for handling this. For example, the preschool teachers were viewing YouTube clips with children to develop children's knowledge about the production of paper.

Another aspect raised by the teachers was the responsibility for taking care of the materials utilised in preschool. This was considered a problem, as toys were sometimes not treated carefully enough by the children.

We noticed that they were not really looking after the things... You have to look after things at the preschool, not just what has been bought "using your own money." There was an assembly, we have so-and-so many Pokémon balls, and if we break them, they're gone. We put them on the table, if you don't look after them and if you're not careful with them, about half will disappear/break. You see, we get a certain amount of money to buy stuff for each unit. We might have to take money from somewhere else, which means we can't buy more toys, paper or beads. If we can relate it to something they care about, it makes it concrete for them. Our assistant principal was there, and she was also able to explain what happens with money. We get money for you children when you come to this preschool. We talk a lot about responsibility and consequences. If you take three spades into the woods, it's your responsibility to bring them back. What happens if we do otherwise? The money for toys

will run out. It was great that our assistant principal could be there and explain it. Demonstrating it with the balls made it very concrete.

In this case, a specific example was given about how children were expected to take responsibility for the materials in the preschool. To promote children's understanding of the importance of this, they were told what the consequences would be if they did not take care of the materials. The fact that money is a limited resource in the preschool was also brought up in the above discussion with children.

Summary

The preschool teachers referred to several examples where they worked with economic sustainability in everyday routines and play. Children were taught different strategies for saving resources and taking responsibility for the preschool materials. The preschool teachers often used concrete examples to connect children's experiences with the specific situation where they wanted the children to learn and change their behavior. For example, they explained that if the toys broke the preschool couldn't buy any new ones, because they only had a specific amount of money for toys. Children were in this sense seen as political-economic actors, taking responsibility for their environment together with the preschool teachers, and further, their critical examination of consumption was facilitated about.

Discussion – preschool as an arena for working with economic sustainability

Studies of sustainability in preschool have developed during the last ten years (Hedefalk, Almquist & Östman 2015). Studies about economic sustainability in preschool, however, especially from a critical perspective, are lacking (Ärlemalm-Hagsér & Elliott 2017, Borg, 2017a & 2017b, Davis & Elliott 2014).

The aim of the study was to construct understandings about how preschool teachers reflect on and articulate their work in relation to economic sustainability, and how they are handled this in the everyday teaching and activities and in relation to children's emerging awareness and understandings of economic sustainability. The research questions for the analysis were as follows: How do preschool teachers articulate economic sustainability in a preschool context? And what everyday activities and teaching situations do they articulate in terms of

economic sustainability? What hidden assumptions appeared in the empirical material when the preschool teachers articulated economic sustainability as an objective in preschool?

The findings revealed that at the beginning of the project the preschool teachers did not view economic sustainability as part of the preschool's activities and objectives, or of the children's learning. Nevertheless, in the dialogues between the preschool teachers and the researchers a hidden curriculum emerged, and it became clear that they worked with these issues on an everyday basis in their routines, their teaching, and the children's activities and play. Näsman and von Gruber (2002) also found in their study that preschool teachers did not see economic issues as part of the preschool program.

The findings also showed that preschools, as institutions, have political, moral and ethical values embedded in their practices. This was evident both at the institutional level and in how the preschool teachers handled economic sustainability in the everyday practices (Dahlberg & Moss 2005) and this reflects the specific historical, social and cultural contexts and traditions of preschools (Ärlemalm-Hagsér 2013, Dahlbeck 2012, Dahlbeck & Tallberg Broman 2011). This is not only seen in Sweden, but also reported from ECE in the UK (Georgeson 2018).

It is clear from the findings that the preschool teachers, as well as the preschools as institutions, can be viewed as political-economic actors (Söderbaum 2014 & 2017) influenced by their ideological orientation and mission. In the preschool communities that participated in this study, economic sustainability was observed both in how the institutions were organized and in their activities and teaching. There was an emphasis on conservation and being careful with resources, sorting, recycling and reusing materials. Another important issue that the preschool teachers connected to economic sustainability was that children should be able to take part in all activities regardless of their families' economic situation. Families could borrow clothes, materials and equipment that were needed in the activities at the preschool as an inclusive approach.

In one example, the preschool teachers described how they taught children different strategies to conserve resources and to take responsibility for the materials at the preschool. In these discussions with the children, the teachers often used concrete examples to connect children's experiences to the specific situation where they wanted the children to construct new knowledges and change their behaviors.

From the perspective of Fraser's (2003 & 2009) concepts "affirmative" and "transformative" remedies, the activities and teaching about economic sustainability were mostly constructive action with-

out disturbing underlying structures, as the preschool teachers did not critically reflect on economic sustainability as an objective in the dialogues. Further, Söderbaum (2014) states, economic sustainability can be interpreted as modernization – recognizing the existence of serious social and environmental problems and being willing to modify the present political-economic system to deal constructively with the problems. The overall values in the preschools were about conserving resources, sorting, recycling and reusing materials, and being careful with toys and other material. The preschool teachers were teaching children strategies for saving resources and how resources and materials were to be used, and were fostering children's behavior change. It also became visible in the descriptions that the preschool children took part in various preschool activities connected to economic sustainability, and that they were seen as important agents. In some of these aspects, the families were involved. Borg (2017a) points out that both parents and preschool seem to be important sources of knowledge about economy-related issues for children.

There is a considerable need to continue to develop the range and depth of knowledge about economic sustainability in preschools and about how preschool teachers and staff can work with these issues in their pedagogical practice to create opportunities for children's learning. This article is just a piece in the larger puzzle of understanding these issues.

Implications in summary

These findings have implications for ECE practice and teacher education, as well as for further research. It is clear that the preschool teachers taking part in the study felt unfamiliar working with economic sustainability. Their work with these objectives was done implicitly and is not problematized by the preschool teachers. Despite this, it became clear that a great deal of activities and teaching related to this theme was taking place in the preschools. The preschool teachers articulated that children have diverse knowledge and experiences in their everyday lives with their families and in the preschool. It is important to support and make use of this experience and knowledge in teaching children about economic sustainability, firstly, in order to critically explore the unseen curriculum that exists in the institutional organizations and activities, and secondly to support children's emergent understanding of economic sustainability and critically examine consumption and lifestyle patterns at the preschool. Teaching about sustainability in preschool education can be significant for shaping a basic understanding

of the environment and society already in preschool. And – in the long term – a sustainable society can be created by the joint efforts of children and adults working together, in the present and future (Sandberg, Lillvist & Årlemalm-Hagsér 2018).

There is a significant need for further studies into how sustainability is understood and handled in the preschool to reveal its ideological orientation and mission. There is also a need for more studies about the preschool teachers' and children's understandings and knowledge. Reviewing and reconceptualizing the practice of early childhood education may therefore be more needed today than ever before, as it is an urgent need to generate counter-hegemonic ways of seeing and understanding the world to secure global change for sustainability. One way of doing this is to use multidisciplinary approaches in research in ECE and sustainability as in this article using economic and political theorists (Fraser 2009, Söderbaum 2014 & 2017). As Moss (2010, p. 9) states:

I want to argue that we, humankind, are in a period of crisis and peril, that we must review fundamentally the purposes of all education and, therefore, the values, qualities and practices needed of all educators, whether working with 15-month-olds or 15-year-olds.

Notes

1. This study was supported by Sweden's financial supervisory authority.
2. In the Saint Lucia celebration on the 13th of December, girls and boys dress in full-length white gowns and sing songs together in a candlelit procession.

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