Among Facilitators, Instructors, Advisors and Educators – How Teachers Educate for Sustainability in Design and Craft Education

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Abstract

Design and craft education, like that of the Swedish school subject, Sloyd, has great potential for Education for Sustainable Development (ESD). With so many possibilities, it is relevant to investigate what teachers teach about sustainability, and how. Therefore, the aim of this article is to examine what Sloyd teachers express that they do as they educate for sustainability in design and craft education (Grades 3–9). This aim is guided by two research questions: (1) What ESD content is prominent in Sloyd teachers’ statements about their teaching? and (2) What expected learning outcomes and teaching strategies become visible in the Sloyd teachers’ statements about ESD? Our analysis of the qualitative questionnaires answered by 70 teachers shows that working with design and craft materials is a key factor for the teachers. Specifically, three learning outcomes have been identified: to utilise material, to use sustainable materials and to become a maker with materials. The most common teaching strategies are instructing and advising strategies, where the goal is known beforehand by the teacher. The findings are discussed in relation to the mix of sustainability concepts and different logics that emerge in the teachers’ expressions and also in relation to what consequences the findings have for teaching ESD in design and craft education.

Keywords

design and craft education, education for sustainable development, teaching strategies, learning, Sloyd

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Introduction

In society today there is a call for the reorientation of how humans act and live their lives. These calls for reorientation have created new demands on education, which includes the initiative of Education for Sustainable Development (ESD). Education is a key factor in the United Nations 17 sustainable development goals listed in Agenda 2030, goal number four in particular (UNESCO 2015). But what it means to educate for sustainable development is far from self-evident, and this question is widely debated in the research field of Environmental and Sustainability Education (ESE) (Jickling 1992; Van Poeck & Lysgaard 2016). One controversial issue is what sustainable development aims for, as sustainable development is a vision with different solutions, and sometimes they conflict.

When arts education, specifically design and craft, is considered as ESD, Hofverberg et al. (2017) has shown that the educational activity can point to different sustainability goals. For example, a possible ESD content of teaching and learning design and crafting may involve making long-lasting or functional products, but an ESD content can also point to what one should learn in the making activity, such as the capability to be creative or knowledge of the whole crafting process. Boehnert (2015) makes a similar conclusion when she argues for a critical understanding of what she defines as ‘ecological principles’ and ‘design concepts’. In addition, Boehnert argues that we need to confront cultural traditions and development frameworks in design education. In other words, the politics of ‘sustainability’ need to be illuminated.

ESD, however, concerns not only different types of sustainability content but also how a specific content is taught. When a school remake project was examined with observations, Hofverberg & Måivorsdotter (2018) shows how different sustainability purposes emerged in the remake activity. For example, aesthetic and functional goals emerged as a tension in the learning activity as well as a tension between a learning-by-doing pedagogy (where students are encouraged to be creative and come up with solutions) and an expert pedagogy (where there are certain ways students should learn to craft). As a result, certain and sometimes conflicting pedagogics evolved in the remake activity.

In Sweden, the Art–Craft–Design subject, Sloyd education, is a mandatory school subject in Grades 3–9. In Sloyd education, students craft artefacts based on their own design ideas. The procedural ‘making’ in materials and the considerations that follow the crafting process are central in the subject, and the emerging objects’ aesthetic, functional and social/cultural values are highlighted in particular. In processes of making in Sloyd, emotional and bodily aspects are highlighted as important (Westerlund 2015; Sigurdson 2014). In 2011, writings about sustainability was added to the syllabus. Specifically, it states that ‘students should be given opportunities to choose and handle materials to promote sustainable development’ (Swedish National Agency for Education 2011, 203). But what does it mean to teach about ESD in the subject of Sloyd? Research in this area is very limited. However, some research can be found on how teachers constitute their teaching in general in Sloyd education. For example, Borg (2001), Nygren-Landgärds (2002) and Hasselsgård (2010) all define different teaching strategies, and further, Jeanson (2017) shows in her research how teachers’ perceptions of the school subject of Sloyd have consequences for how teachers constitute their teaching. What this research shows and what is of interest for our investigation is that a Sloyd subject content can be taught differently depending on how the teachers interpret the
curriculum and what teaching strategy the teacher uses. This leads to the relevant question: How do teachers interpret and teach ESD in Sloyd education? As there is limited research in this area, this article aims to fill this research gap.

The aim of the article is to investigate what Sloyd teachers express that they do when they educate for sustainable development in Sloyd education. In this aim, two research questions have been formulated:

1. What ESD content is prominent in Sloyd teachers’ statements about their teaching?
2. What expected learning outcomes and teaching strategies become visible in the Sloyd teachers’ statements about ESD?

Theoretical framing on aesthetics: teaching and learning strategies

Art education’s positive impact on education is well established (Bamford 2006; Caldwell & Vaughan 2012; Davis 2008; Eisner 2002; Fiske 1999; Wright 2003), but research also shows that teaching the arts is not self-evident, and we need to pay attention to what art education also produces (Efland 1990; Eisner 2002). One way to foster the role of the arts in education is to acknowledge both the goals – that is, what the teaching aims for – and the means for how the goals are accomplished or expressed. Lindström (2012) presents a model that is based on goals and means for aesthetic teaching and learning (Figure 1). The model describes two important perspectives for teaching and learning aesthetics.

The first perspective focuses on the imagined outcome of the goals and means. According to Lindström (2012), the goal can be either convergent, where the strategy of teaching is goal-directed, or divergent, where the learning is explorative, open-ended and imaginative. Regarding the means, Lindström makes a distinction between medium-specific means, where the form of the message is important, and media-neutral means, where the same goal can be achieved regardless of the form of representation. By combining the goals and the means two-by-two, Lindström defines four expected learning outcomes: learning about, in, with and through the arts.

The second perspective of the model explicitly expresses teaching strategies related to these learning outcomes. Lindström complements his model with Hasselskog’s (2010) description of four different ways of teaching Sloyd, which are described as instructor, facilitator, advisor and educator. The first two teacher strategies, that of the instructor and the facilitator, support a medium-specific learning outcome based on a traditional way of learning craft by imitating a skilled master. The differences between the two are that the instructor’s main strategy is to guide and direct students’ work towards an already defined solution in the craft work, whereas the facilitator’s strategy is to assist the student during the design and craft process and work with the students to fix and handily solve any practical problems that may arise along the way. The solution is thus not predefined in the facilitator’s strategy (Hasselskog 2010). Lindström (2012) stresses the instructor’s technical and convergent focus, in that the learning outcome is well known in advance and therefore differs from the facilitator’s more divergent approach in which the learning outcome is more open-ended. The instructor’s strategy therefore emphasises basic craft knowledge (i.e. learning about craft), while the...
facilitator rather supports learning in craft via an experimental approach to materials and techniques.

The other two teaching strategies, that of the advisor and the educator, support a medium-neutral learning outcome, which focuses on reflection and dialogue. The advisor’s main strategy is to discuss with students and explain in order to support students’ learning outcomes, while the educator’s strategy is based on a tendency to listen and discuss problems on a more general level (Hasselskog 2010). The advisor’s strategy supports learning with craft that requires craft to be integrated with other subject content. According to Lindström (2012), the advisor’s strategy is convergent-directed, which means that the learning outcome is defined in advance and there is a right or normative solution. Lastly, the educator supports learning through craft, which points to a learning that is divergent and open-ended. The educator’s teaching strategy aims to develop students’ abilities that go beyond craft, for example, to persist, express or think in new innovative ways. Lindström stresses that the educator wants to acknowledge what is not expected and strives for a ‘breaking away’ from the past and what is already known. The teaching strategies that Lindström describes and links to his model of teaching and learning aesthetics thus deepens the understanding of what it means to teach about, in, with and through aesthetics.

This model will serve as an analytical tool when we examine what expected aesthetic learning outcomes become visible in Sloyd teachers’ statements about ESD, and further, how the teachers express their teaching strategies.

Figure 1
The figure shows Lindström’s (2012) model for learning the arts and the teaching strategies that are related to the imagined learning outcomes.
Methodology

To examine what teaching content Sloyd teachers offer students when integrating ESD as a content in educational Sloyd, we created qualitative questionnaires with open questions to be answered by the teachers in running text. The qualitative approach and open-ended questions are particularly suitable for previously unexplored areas (Bryman 2018) where extensive and personal data is requested (Cohen et al. 2007). The survey was completed in 2018 and was answered by 70 Sloyd teachers (initially delivered to 168 teachers).

In the survey, teachers’ descriptions of how they organise teaching ESD in Sloyd and what students are supposed to do were sought as well as how they described ESD. For example, they were asked if they had experienced dilemmas in their teaching or if they had other visions or suggestions when teaching ESD in Sloyd. The selection of informants is to be considered a convenience selection (Trost & Hultåker 2016), as the questionnaire was distributed to groups of persons working as Sloyd teachers while at the same time undergoing studies in qualifying education programmes and comprehensive training in Sloyd at two different Swedish universities. By contacting the informants through university courses, the selection is non-random and does not claim to be representative of the Sloyd teacher profession as a whole. Some of the participating teachers did have formal qualifications to teach Sloyd, but most were relatively experienced as Sloyd teachers in school. More than one third of the teachers had taught for three to 15 years. Another third was still in their first or second year. The last third consisted of teachers who, for unknown reasons, did not answer the question of how long they have worked as a Sloyd teacher, and six teachers stated that they taught Sloyd for sixteen years or more. In the current situation of teacher shortage and a high proportion of unauthorised teachers working in schools, we find these informants interesting given that statistics from the Swedish National Agency of Education (2016) show that as many as 40 per cent of Sloyd teachers lack formal qualifications, and therefore, it is likely that students will meet unauthorised teachers at some point during their schooling.

After the data collection, the teachers’ answers to the survey questions were compiled question by question. We chose to structure data this way in order to apply an idea-centred approach (Esaiasson et al. 2017). The analysis was carried out in two steps, with this articles two research questions serving as a guide.

In the first step, we took part of the data as a whole to get an overview of the content. Through qualitative content analysis (Esaiasson et al. 2017; Trost & Hultåker 2016), in-depth reading of the data material, and an analytical movement between the parts and the whole, we identified what the teachers expressed as an ESD content. At this stage, we were not interested in how the teaching was conducted, but rather we wanted to identify different ESD topics that could be found in the teachers’ expressions. For example, all teachers expressed materials as a key factor, which is not surprising due to the fact that the syllabus states, as previously mentioned, that students should be given opportunities to work with and handle materials to promote sustainability. However, what this meant – that is, what working with and handling materials were constituted as – differed in the teachers’ statements. Based on the different expressions, we were able to identify three different topics, which we describe in the findings.

In the second step of the analysis, we further explored the envisioned learning outcomes and teaching strategies in the Sloyd teachers’ statements about ESD.
Lindström’s (2012) model for aesthetic teaching and learning, and specifically, the concepts of convergent/divergent, media-specific/medium-neutral and the four teaching strategies (instructor, facilitator, advisor and educator) were used as analytical tools. The analysis made it possible to illuminate what the teachers express as an envisioned learning outcome, and further, what consequences this may have for how the ESD content is taught in Sloyd education.

Findings

The teachers’ descriptions of what they teach

When we analysed what ESD content was stressed by the Sloyd teachers, which answers our first research question, almost every teacher expressed that they worked with materials. From the teachers’ statements we could identify three major topics related to ESD and materials.

The first topic, which also was the most frequent answer, is to utilise materials. This was expressed as the importance of making use of all craft materials and not throwing away smaller parts of materials. This goes for all craft materials in the survey (i.e. textiles such as yarn, fabric or garments, woodwork and metalwork). For example, one teacher states that he often nags students about not throwing away any materials or offcuts (Teacher 1), and another teacher describes how smaller parts of fabrics are used for applications or as filling for plush toys, and further, how she collects leftover fabric and delivers it to the the chain store, H&M, which collects used fabric (Teacher 25). Many of the teachers also describe how utilised materials are used in remake activities such as upcycling t-shirts (Teacher 2, Teacher 52).

The second topic, which is also a theme commonly expressed among the teachers, is to use sustainable materials. However, what is considered a sustainable material can differ. One teacher expresses that he makes sure that his students understand why they use pinewood, which he considers sustainable because Swedes have it in abundance and it is cheap (Teacher 3). Another teacher also consider birch to be sustainable, but put forward the argument that it is locally produced as well as an environmentally friendly material (Teacher 61). The third example is of a teacher who states that she uses organic yarn, in particular, yarn made out of bamboo and milk protein. She explains that, in addition to the environmental awareness aspect, she hopes that this also piques the students’ curiosity (Teacher 67). Many of the teachers working with textiles also expressed that, in their teaching, they address issues within the textile industry and show how fabric is made (Teacher 34, Teacher 40). Many of the teachers stated that they showed a film about how clothes are made and in class talked about what the students as consumers can do and think about regarding sustainable development. Some of the teachers also gave more specific advice, such as why plastic (i.e. polyester material) is not good for the environment and what materials are more likely to be sustainable (Teacher 5). These examples all provide knowledge about sustainable materials (both craft materials and clothes), even though what is considered as sustainable is not always the same. Sustainable materials, as it is constituted in the teachers’ expressions, can point to where the material is made, what it is made of and how it is made. Accordingly, what sustainability is constituted as can be related to all three dimensions: the ecological dimension (the material is locally produced), but it can also be that the material is made from ecological materials even if it is
far away from Sweden, like with bamboo or that the material is organic and therefore considered sustainable), the economic dimension (the material is cheap) and the social dimension (the material or the clothes are produced according to human rights standards).

The third topic that we identified is what can be defined as to become a maker with materials. For example, one teacher expressed how she wanted her students to appreciate the products that they craft in class, and she also expressed that old artefacts have a value of affection compared to new machine-made items (Teacher 67). Another teacher made a similar argument, as she expresses how she wants the students to be proud of what they make and how this pride can prompt the student to use the product several times rather than just once (Teacher 56).

In the empirical data, teachers also expressed that not all students wanted to become a maker, as they expressed that unmotivated students were a challenge (Teacher 16) and that some students did not want to remake clothes. In fact, several teachers expressed that many students thought it was disgusting to use old clothes (Teacher 1, Teacher 17) and that the students expressed that it was easier to buy new clothes, which, according to the teachers, the students argued were fancier (Teacher 46).

The teachers’ descriptions of how they teach

When the three topics were analysed with Lindström’s model of aesthetic teaching and learning, we could see that the pedagogy – the envisioned outcome and how the teaching was made – differed. Three out of the four categories from Lindström’s model could be identified and will be described in the following section. The fourth category, an educating pedagogy with a strategy through materials, was not often found in the teacher’s expressions. We further analyse the possible reasons why when we discuss the findings of our survey.

An instructing pedagogy – ‘learning about’ as an ESD strategy

Based on Lindström’s model, learning about materials are found in all three topics. Regarding the topic of utilising materials, learning about materials is very common in the data. Students are expected to learn and understand that materials can be reused and that they should not throw away anything. But it is also about utilising the materials in the process, that is, to learn about how to use materials in an effective way so the student minimises waste. Regarding the second topic, learning about what sustainable materials or sustainable clothes are becomes important, even if what is considered as sustainable differs. The pedagogy that is offered in these examples – about utilising materials and about sustainable materials – is a teaching strategy about materials where the teacher becomes an instructor who clearly explains what is considered the right thing to do. As a result, the students are offered a convergent medium-specific content through the teaching instructions. It is convergent, as the content about materials in relation to ESD is given in advance as what one should do about the material – that is, utilise it and consider whether it is sustainable – and further, it is a particular material that makes the teaching content media-specific.

Although the finding that teachers give knowledge about materials may seem obvious and straightforward from a Sloyd perspective, it is crucial to note that the empirical data of teaching about materials, from an ESD perspective, points to two different sustainability practices. The first sustainability practice that emerges from the empirical data is rooted in the historical remake practice in northern Europe.
where everything was saved and used again. It made sense to save every little piece, as fabrics were expensive and one could not afford to throw away materials. The other sustainability practice visible in the data is a recycling practice where ‘waste’ is collected and given to someone who can reuse it. One example from the data is when the teacher collects the leftover fabric and gives it to a retail clothing chain store. The two sustainability practices are in different contexts and in terms of who is doing what. In the historical remake activity, the materials are reused at home and the craftsperson is the agent and responsible for the materials to be reused. In contrast, when the material is collected and given to a chain store, the responsibility of reusing the material is passed on to someone else.

**A facilitating pedagogy – ‘teaching in’ as an ESD strategy**

Another learning strategy that could be identified is a facilitating pedagogy, which is, according to Lindström, when the goal is divergent (not pre-given) and the means are media-specific (there is a specific material at stake). Examples of this pedagogy is when the teacher refers to experimenting in materials and techniques. One example is with the remake projects, as the recycled material is given in advance, which makes the activity medium-specific. However, what new products the students should make or what techniques they should use are not given, which makes the activity divergent. Another example is when a teacher describes how the students learn to feel and evaluate different materials without stating what is a good or bad material. She states:

> In school, students gain knowledge of material by, among other things, tactfully experiencing, seeing and working with different materials. They are free to choose which materials they want to work with, for example, artificial materials or natural materials. Sometimes I choose specific materials and then they have to compare how they experienced natural and artificial materials. (Teacher 65)

By providing a teaching strategy that enables the students to learn for themselves how different materials feel, the teacher facilitates a learning that Lindström defines as a teaching in materials. The expected outcome is media-specific (certain materials) and divergent (what the students should learn in terms of whether the material is sustainable or not is not given). Here, the teacher works together with the students, which is a key factor in a facilitating strategy. This can be done in terms of what the students should remake or what can be considered as sustainable materials. It is worth highlighting that the students’ experiences with, and knowledge of, the materials is through the body, for example, by tactile exploration, like feeling the different materials with one’s hands, which then creates new knowledge.

**An advising pedagogy – ‘teaching with’ as an ESD strategy**

The third learning strategy that appears in our analysis follows from a teaching with materials. In this category, the teaching strategy is based on how something else is taught while learning crafting. For example, one teacher states, ‘We show various informative films, give inspiration, plus students gain knowledge about sustainable ways of thinking within other school subjects’ (Teacher 40). Accordingly, there is a sustainable way of thinking, and what this can mean is shown in all three topics. In the first topic, ‘to utilise materials’, students learn not to waste materials. But not to waste is viewed not only in regard to the materials but also in terms of
not wasting money, natural resources or planetary resources. One teacher expresses it in the following way: ‘When I ask the students to be economical, it’s not just about money, but I mention in the same breath, ‘Think about nature’ (Teacher 67). Another teacher explains about a similar matter: ‘In the crafting process, I want the students to understand where to cut the fabric or saw a plank/branch and become cautious about materials (resource efficiency). I also relate this action to a bigger perspective – the society and the environment’ (Teacher 42).

In the examples here, not wasting is constituted as a generic skill, and through an advising pedagogy, it becomes reasonable and in fact possible to save not only materials but also money, even if it is not the students’ money that we are referring to. It also becomes possible to save nature or the environment by cutting the fabric or a branch in a specific way.

A similar argumentation is to be found in the second topic about using sustainable materials. When learning about sustainable materials, and in particular, in the descriptions of sustainable textile production, teachers state that students can also become sustainable consumers. This is expressed in statements like the following:

‘It is [not only] about understanding the textile industry and how it affects the environment but also about understanding how a consumer can influence or act in a more sustainable way’ (Teacher 26). ‘Knowledge about materials – what materials we use, why, where they come from, who makes our clothes, chemicals, et cetera. Talk about purchasing, for example, their clothes, how the amount of clothes affects things and how we use clothes’ (Teacher 16).

What we have to bear in mind here when reading these quotations is that, in Sloyd education, students are designing and crafting products, for example, by knitting, sewing clothes or carving wooden butter knives. Nevertheless, it is considered that by working with materials as producers, students can also learn to become sustainable consumers. This is reasonable with an advising pedagogy, as it is media-neutral and convergent in its character.

In addition, an advising pedagogy is also found in the third topic to become a maker. Here, the norm to appreciate old products (and not buy new things) and value the handmade products that the students have crafted (compared to new, machine-made items) is considered as something good that the students need to learn. Again, these norms are made reasonable, as the strategy is convergent and media-neutral. What we also see here is that the teachers expressed some challenges involving the students’ emotions: not all students wanted to remake, some students were unmotivated, and others thought that remaking old clothes was disgusting. Being unmotivated or feeling that something is disgusting are emotionally challenging aspects for both the student and the teacher. We will come back to this when we discuss further implications.

In this study, we found the ‘added contents’ that become visible in the advising pedagogy very interesting. What caught our interest is not only the acknowledgement of these added contents, such as the generic skill of saving, learning to be a sustainable consumer when being a producer, and to appreciate old and handmade products, but also how the sustainability actions are rooted in different practices and how it differs depending on who is performing the sustainability act. For example, the skill of ‘not wasting’ is rooted in a historical remake activity where everything is reused by the craftsman (Hofverberg 2019) – one had to save materials, as fabric was expensive. In the empirical data, the same logic of saving is
expressed when the teacher utters that it is not just materials that can be saved, but also money, natural resources and planetary resources. But what does it mean to ‘save the planet’ in a craft and design classroom? Here, the same logic of saving is transferred from one very concrete practice (a historical remake practice) to one that is more abstract, as neither money nor nature is present in the classroom. Another sustainability action is to become a sustainable consumer. In the empirical data, this is related to the textile industry, and one idea here is that new technology will solve the environmental and sustainable crises, which is often described as ‘ecological modernisation’ (Dryzek 1997). In short, we can continue to consume as we do as long as the production process produces no waste and becomes ‘sustainable’. A third sustainability action is about the idea of valuing old and handmade products. This idea is rooted in the Arts and Crafts Movement, which is a movement that is a reaction against industrialisation and machine-made items, and it calls to further value the crafted product and pay attention to the affection and joy a crafted product gives (Adamson 2013). It appears that all of these sustainable actions co-exist in the empirical data but the sustainability actions – what they are and who is the agent of the action – are not made explicit by the teachers. Interestingly, none of the teachers in the survey articulate or problematise that ESD in Sloyd could be contradictory and mean different things.

Discussion

The aim of this article is to investigate what Sloyd teachers express that they do when they educate for sustainable development in Sloyd. When answering the first research question – What ESD content is prominent in Sloyd teachers’ statements about their teaching? – the findings show that working with the material in Sloyd education is considered a key issue, which resonates with the curricula writing. However, what this means more specifically from an environmental and sustainability perspective differs. In particular, three material-related topics are prominent in the teachers’ statements: to utilise materials, to use sustainable materials and to become a maker with materials. These three topics have been outlined in the findings.

When answering the second research question – What expected learning outcomes and teaching strategies become visible in the Sloyd teachers’ statements about ESD? – the findings show that the most common teaching strategies in our data are instructing and advising teaching strategies, where the goal is convergent and known beforehand by the teacher. When implementing an instructing teaching strategy, the teacher uses a media-specific means that aims to teach about materials. In our findings, this is expressed as learning to utilise materials, for example, to learn to save all of the material or in the process learn to be economical with materials. Learning about materials is also acknowledged in our findings when learning about sustainable material, which is expressed in relation to all three dimensions of sustainable development, and therefore, what is considered sustainable differs.

When implementing an advising teaching strategy, the teacher is teaching with materials, and the teacher adds or highlights something else that goes beyond the crafting activity. In our findings this is shown, for example, when the teacher expresses that it is not only materials that are ‘saved’ but also money and the planet. Another added content teachers express is that, when working with
sustainable materials as producers, students can also learn to become sustainable consumers.

A final example from an advising pedagogy is to learn to appreciate old and handmade products. These added contents all become reasonable when the teaching strategy is convergent and media-neutral. There are only a few examples from a teaching strategy that emphasise divergent goals where the outcomes are unknown. An example of this type of teaching strategy is how, when recycling clothes, the material is known but not the outcome, or when a teacher describes how the students learn to feel and evaluate different materials without stating what is a good or bad material.

With this survey, we have been able to show that working with and handling materials to promote sustainable materials as it is stated in the curriculum means different things, and the expected outcomes and teaching strategies are different. How these findings should be interpreted and what consequences these findings have for an ESD design and craft pedagogy is something we now turn our attention to.

Consequences and further research for teaching ESD in design and craft

The findings show that the most common teaching strategies in our data are instructing and advising strategies, which is an interesting result, as both of them are convergent. In the survey, we also asked about challenges, but few teachers problematised ESD or pointed to uncertainty in their responses. Also, given the character of the survey, we do not know if the teachers actually use more divergent strategies in their teaching. This would be relevant to investigate in further research. That is, not only what teachers do — in action — as they teach about sustainability but also how they express and talk about what they do. The latter is particularly relevant, as research has shown that embodied and practical knowing in design and crafts is not necessarily expressed verbally (Borg 2001; Sigurdson 2014; Hofverberg 2019). If this is the case, there is a need to develop a language of sustainability that enables teachers to address the tacit dimensions of embodied and practical knowing in design and crafts.

Another result was that ‘teaching through’ was seldom found in our data. Only one of the 70 teachers mentioned that ESD gives a possible frame to work in a more ‘creative and artistic’ way (Teacher 49), but the teacher does not further explain how or in what way, and therefore, we have not been able to explore that further. The absence of the teaching strategy was unexpected because, according to previous research, teaching through as a strategy is a part of Sloyd education (Borg 2001; Nygren-Landgärds 2000; Hasselskog 2010). To be creative and to express oneself artistically could point to a teaching through where the outcome is divergent and media-neutral. An example of teaching through is, what Lindström describes as, ‘breaking away from the already known’. To not know the goal but put oneself out there is also something that resonates with a pluralistic teaching strategy that is often emphasised in ESE research (Ohman 2008), and arguably, teaching through is thus relevant for ESD. But why is the perspective missing?

We argue that one possible interpretation for why the teaching strategy, teaching through, is not present in our data has to do with a focus on the
materials (Westerlund 2020) in Sloyd and a particular interpretation of materials being related more to craftmanship than to design. This is despite that materials are essential to both craft and design, and both perspectives of craft and design are present in the curriculum. In her research, Jeansson (2017) shows that craftmanship is a main basic tenet of Sloyd education among professional teachers. Crafts have also traditionally been taught from a skilled master to novices and those less knowledgeable, in what Hofverberg (2019) calls an ‘expert pedagogy’ (i.e. convergent teaching strategies), which, in our result, seems to remain in the subject. Hence, the central position of the craft materials and its link to craftmanship rather than design could be a possible interpretation for what causes the dominance of convergent teaching strategies.

What is also interesting is the mix of sustainability actions in the teachers’ responses. The logic of ‘saving’ and not throwing away anything, which comes from a historical remake practice, is transferred to a sustainability action of ecological modernisation. Therefore, it is reasonable to save not just material but also money or the planet. In this logic, it would also be reasonable for a teacher to collect leftover fabrics and give it to H&M. Here, a historical remaking practice is reinterpreted with concepts of recycling. This in turn makes us question whether collecting materials and delivering them to H&M is part of a teacher’s responsibility. It also makes us question whether the students are actually saving money or the planet when they do remaking projects. To ‘save the planet’ is indeed a very abstract notion, but we understand the logic of the statement due to historical threads and modern sustainability actions.

The emphasis on convergent strategies that is prominent in our findings indeed has consequences for an ESD Sloyd pedagogy. One consequence when using an advising or instructing teaching strategy is that the diversity of an ESD content is made invisible. Research (Boehnert 2015; Hofverberg et al. 2017) shows that when design and crafting is made as an activity for sustainability, there are many possible contents that point to different, and sometimes conflicting, sustainability goals. This is also confirmed in our findings; for example, ‘sustainable’ materials can mean many different things as well as what it means to become a ‘sustainable’ maker. If these different sustainability actions are not made explicit – that is, what they aim for and the politics related to sustainability – the education is likely to end up with ‘greenwash’ teaching, where anything can be environmental or sustainable (Jickling 1992).

Yet, as far as the risk of ‘greenwashing’ is true, the reorientation of how humans live makes the statement expressed by a teacher in our study – ‘I often nag about not throwing away any materials’ – highly relevant and true. There is no ‘greenwashing’ in that, and the statement resonates with, for example, Greta Thunberg’s (2019) mission: we cannot continue to live the way we have been living. We need to re-learn. But, is it enough to make sustainability actions explicit? That is questionable because more information about sustainable and environmental issues has proven not to be the answer. We have had that knowledge for a long time. Today, children know about the climate change crisis, and teenagers are aware of over-consumption and other related issues. Rather, we argue that a key question here is that we cannot put aside how students (and teachers) respond emotionally to teaching strategies on aesthetic learning. In other words, students’ and teachers’ affective and qualitative experiences matter.

Emotions, we argue, are communicative responses dependent on embodied experiences and are thus central in students’ meaning making in relation to a
specific teaching content (Westerlund 2015). For example, in the empirical data, some teachers expressed that some students did not want to remake old clothes because they thought that old clothes were disgusting. Here, ‘disgusting’ is not an informative knowledge that can be changed with information about why, or why not, old clothes are disgusting, but rather, we argue that disgusting in this situation is an embodied emotion that we need to pay attention to (cf. Westerlund 2015). One problem here is that teachers cannot teach ‘correct’ emotions or tell a student that their feelings are incorrect. To use Biesta’s (2015) language, that would be ‘miseducational’. In turn, these emotions provide both a challenge and an opportunity for aesthetic teaching and learning. From this perspective, the outcome of, for example, teaching about a sustainable material, has an aesthetic and embodied expression. But, as our result shows, the different sustainability actions are rooted in different culturally consolidated and sometimes conflicting sustainability practices, which according to Boehnert (2015) are necessary to confront in teaching. If these culturally consolidated practices are confronted, then students’ emotional expressions, such as disgust for old recycled clothes, can function as important indicators of conflicting approaches where teachers in their teaching are given the opportunity to problematise how different sustainability practices enable some actions while making others impossible. This may not be easy, but by paying attention to the aesthetics and emotional dimensions of sustainability, teachers could offer far more complex teaching and learning. How this teaching and learning is made and performed is relevant to investigate in further research.

To conclude, we believe that teachers cannot teach students how to handle and how to choose materials to promote sustainable development as it is currently stated in the Sloyd education curriculum. However, teachers can teach and support students to aesthetically handle and choose materials in design and crafting, as they instruct, facilitate, advise and educate students in their actions of becoming in a sustainable world.

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