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RESEARCH ARTICLE

What Kind Of Actions Are Appropriate? - Eco-School Teachers' and Instructors' Ranking of Sustainability-Promoting Actions as Content In Education For Sustainable Development (ESD)

Ulrica STAGELL*
Jönköping University, SWEDEN

Ellen ALMERS
Jönköping University, SWEDEN

Per ASKERLUND
Jönköping University, SWEDEN

Magnus APELQVIST
Jönköping University, SWEDEN

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Abstract

Based on the consideration that learning about different action alternatives and strategies are essential parts of ESD, this quantitative study focuses Eco-School teachers' and instructors' views on including different sustainability-promoting actions in teaching practices. Direct actions, and actions that take place in the private sphere were viewed by both groups as the most appropriate actions to include in teaching practices. However, actions related to individuals as consumers were seen as less appropriate by teachers than by instructors, and consequently have been less included in teaching practices. The actions considered least appropriate by both groups were two indirect actions occurring in the public sphere aiming at solutions on a structural level, *engaging with political parties* and *engaging with NGOs*. The results highlight teaching that addresses the individual's moral responsibility in the private sphere, and that different action strategies for the democratic change of social structures tend to be excluded.

Key words: ESD, action, teacher, Eco-School, sustainability.

Introduction

The present study is based on the consideration that learning about action, different action alternatives and strategies are necessary components in education for sustainable development, ESD[1] . Teachers' perspectives on including different actions aiming at achieving sustainability are thus an important area to explore. Research on ESD focussed teachers has provided knowledge about teachers' understanding of sustainable development, different teaching traditions and approaches, but knowledge is still lacking about teachers' views on including different sustainability-promoting actions. The aim of the article is to study Eco-School teachers' and instructors' views

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*Corrsponding Author: Ulrica Stagell, Jönköping University, School of Education and Communication, Box 1026, SE-551 11 Jönköping, Sweden, +46 (0)36 101360, E-mail: ulrica.stagell@hlk.hj.se

on the appropriateness of including different sustainability-promoting actions as content in ESD.

Actions from a sustainability and educational perspective

Several perspectives on the role of action in environmental and sustainability education have been distinguished in educational research. Actions in education have been viewed as a means of achieving learning about the environment (Hart & Nolan, 1999), which in many cases can be compared to what Jensen (2004) defines as 'activities'. Conversely, actions in education have been viewed as a means for learning for the environment (Hart & Nolan, 1999). Actions in education have also been considered as a means to achieve direct effects in the environment, now and in the future. In the Action competence model of ESD (Jensen & Schnack, 1997), the active choice of action and the critical evaluation of action strategies have been highlighted as significant ingredients in the desired capability developed through ESD. Similarly the international network of Eco-Schools[2] stresses the importance of developing students' awareness and ability to act in school and the community (Foundation for Environmental Education, n.d.). An action orientation is also emphasised by the Swedish network of Eco-Schools, which furthermore states that education will start with concrete actions promoting sustainability (Keep Sweden Tidy, 2011). In this paper the term sustainability-promoting action is used for actions that can enhance sustainability. These actions may be included in the educational setting through different approaches such as providing information about action alternatives, discussing different action strategies with students or offering students possibilities to perform the actions. Actions promoting sustainability involve actions with both direct and indirect consequences for sustainability. Actions aimed at limiting greenhouse gas emissions for instance can be about choosing to travel by train instead of by car. This kind of action is classified as a direct action, since it involves a direct relation between the actor and the environmental consequences (Jensen, 2002). An indirect action, on the other hand, can be for instance about promoting sustainable transportation through individuals, political parties or other communities (ibid.). Indirect actions influence living conditions so that choices of actions are affected. Direct and indirect actions are not to be seen as excluding each other, but rather as interacting and complementary. Further, Monroe (2003) discusses five types of behaviour[3] related to education in environmental issues: environmental activism (taking action in environmental issues for the common good), non-activist political behaviour (indirect actions for the common good, e.g. giving money to an environmental organisation), consumer behaviour (actions that pertain to the individual's life-style), ecosystem behaviour (direct actions that change conditions in nature, e.g. growing plants to support pollinators), and fifthly, other behaviours that are related to profession and workplace. These categories of actions may also be discussed from the standpoint of whether the actions take place in the private or public sphere (Chawla & Flanders Cushing, 2007; Short, 2009; Stern, 1999). Whereas consumer behaviours and ecosystem behaviours take place in the private sphere, environmental activism and non-activist political behaviours are public sphere behaviours, where the individual engages in active citizenship (Short, 2009). It is also possible to discuss a form of nonactive citizenship, a position which Stern et al (1999) labelled policy support, which could be about a willingness to accept policies that may infer and/or restrict actions in the personal sphere, for example increased taxes for fuel consumption.[*]

[1]Here education for sustainable development, ESD, is used in a broad sense including education that, in one way or another, aims at a sustainable future: EE, ESD, EfSD, EfS, GLESD etc.

The importance of ESD to prepare students to take active responsibility in several ways is stressed by Jensen & Schnack (2006): "The aim of environmental education must be to make present and future citizens capable of acting on a societal as well as[†] [‡§]personal level" (p. 472). Research, however, gives a picture that is somewhat discouraging. Manni et al. (2013), in their study of 10-12 year old students' understanding and valuing of the different dimensions in sustainable development and how these relate to each other, report that only ten percent of the answers relating to the social dimension indicated an action orientation. All of the participants in a study of young Swedish people expressing high action competence both in the private and public sphere (and for some of them also in the professional part of their lives), reported a lack of instruction about actions in the public sphere during their time at school (Almers, 2009). From their sociological research perspective, Soneryd and Uggla (2011) accentuate the strong contemporary discourse of individual responsibility which tends to focus on the individual as consumer rather than as citizen, and at the same time point to the lack of discussion about how people's choices are constrained by social structures and resources. Similarly, Short (2009) concludes from an environmental education (EE) perspective that "[t]he importance of local actions in the private sphere is recognized, but the neglect of EE practioners in preparing students for larger scale actions in the public sphere should be acknowledged in order to stimulate productive dialogue to rectify this frequent omission in EE" (p. 13). Additionally, research on EE action outcomes, monitored by self-assessment surveys, has focused on private sphere actions and neglected possible actions in the public sphere (Chawla and Flanders Cushing, 2007). The position of teachers as potential obstacles for the inclusion of different action alternatives for sustainability in education, which in some way or another may contribute to the development of students' action competence, makes it relevant to ask questions about their views on including different actions in teaching practice.

Teachers in education for sustainable development

Researchers with a specific focus on teachers in relation to ESD have investigated teachers' ways of understanding sustainable development and ESD (e.g., Björneloo, 2007; Borg et al., 2012; Öhman, 2004) or how their understanding and reflections influence teaching practice (e.g., Jonsson, 2008; McNaughton, 2012). One strand of this research has investigated teaching traditions in the Swedish context, such as the fact-based, normative and pluralistic teaching traditions related to environmental and sustainability issues (Sandell, Öhman, & Östman, 2005; Sund & Wickman, 2008; Öhman, 2004, 2008). Other research on teachers' relations to ESD has explored teachers' perceived barriers to ESD, such as the controversial character of many of the solutions discussed within the area of sustainability (e.g., Bursjöö, 2011; Oulton, Dillon, & Grace, 2004; Winter & Firth, 2007). Barriers could also arise from lack of content knowledge, lack of time, or difficulties in teaching the way they want due to the prevailing climate in the school (Winter & Firth, 2007). The teacher's personal

[2] **"**Eco-Schools is the largest sustainable schools programme in the world and is operated by the Foundation for Environmental Education (FEE)." Retreived 21th of January 2013 from http://www.eco-schools.org/

[3] In the context of this study Monroe's (2003) use of the term 'behaviour' may be regarded as a synonym for 'action'.

commitment and teaching purposes have been highlighted as important factors for ESD by Axelsson (1997), Shuman & Ham (1997), Sund & Wickman (2008), Pepper & Wildy (2008), Wickenberg (1999) and others. Research dealing with teachers' views on the role of sustainability actions within ESD is not frequent. However, within the area of research on action competence Jensen and Schnack (1997) have discussed different types of activities and actions used in ESD and EE. The conclusion they draw from studying various development projects in Danish schools is that "indirect actions are by far the most common in schools" (p. 479), especially with regard to problems of a regional or global nature. In a Swedish context, Bursjöö (2011) has discussed the dilemmas and/or satisfaction that teachers experience in relation to being a role model in personal life as concerns sustainability actions. Research has, however, not focused on how particular teachers relate to different sustainability-promoting actions in teaching practices.

The study

Based on the premise that the inclusion of actions in teaching practices depends on teachers' choices of lecturing, which to some degree is in turn dependent on their experience during teacher training, we would like to explore Eco-School teachers' and instructors' views on the appropriateness of including different sustainability-promoting actions in teaching. As the importance of action for sustainability is highlighted in the Eco-Schools' curricula (FEE International, n.d.), there are incitements for teachers at Eco-Schools to consider the inclusion of different sustainability-promoting actions in their teaching, either in terms of information and discussions about possible actions or in terms of student participation in actions. To become certified as an Eco-School, the schools go through a process including specific teacher training by instructors from Keep Sweden Tidy, and the development of a school agenda. The objective of the present study is to investigate what kinds of sustainability-promoting actions Eco-School teachers and instructors respectively find appropriate/inappropriate either to introduce to students or to offer them as actual action experiences. The research questions that will be examined are:

- What kind of sustainability-promoting actions do Eco-School teachers and instructors respectively find appropriate/inappropriate to discuss or offer to the students as actual action experiences?
- To what extent do the teachers and instructors claim that they have included sustainability-promoting actions in teaching practices?
- What differences, if any, can be seen in how Eco-School teachers and instructors view the appropriateness of inclusion of different sustainability-promoting actions in teaching practices?

Methods

To examine Eco-School teachers' and instructors' views on different sustainability-promoting actions in educational practice, the participants were asked in interviews to grade the appropriateness of including different actions in teaching practices according to a standard questionnaire.

Participants

The participants in the study were 24 Eco-School teachers at a dozen schools in southern Sweden, from pre-school to upper secondary school, and 9 Eco-School instructors employed by the Green Flag organisation at different locations in Sweden.

The teachers either worked at a school certified with a Green flag diploma or had recently before the interviews attended Eco-School training (half a day) for schools that had started the procedure to obtain a diploma. The selection process can, in the case of the teachers, be said to be opportunity sampling (Patton, 2002) as all Eco-Schools in the region were contacted and all teachers who had attended the Eco-School in-service training and were willing to participate in the study were selected. The selection may be biased in the sense that there might be patterns associated with wishing/not wishing to take part in the study. However, interviews reveal a spread in the participants' engagement in the work with the Green Flag diploma, so it was not, as one might have supposed, only the individuals who were very involved in ESD who participated in the study. For the Eco-School instructors the selection covered a large part of all instructors employed in the country.

Data collection

A structured questionnaire with fixed rating alternatives was used for the interviews, during which the interviewer wrote down the ratings. In the interview guide 16 sustainability-promoting actions were presented for the participants to grade from 1-6 in relation to the perceived degree of appropriateness of inclusion in teaching practices. If the participants found the action very appropriate they were asked to rate it 6 and if the action was considered very inappropriate to rate it 1. For every action participants were also asked to motivate their rating, in order to enhance the validity of the quantitative questions. Additionally, for each of the 16 actions, the participants were asked whether they had included it in their teaching or not.

The choice of the 16 actions in the study was motivated by the following considerations. Some of the actions were chosen because they have been scientifically acknowledged as significant for sustainability. Examples of such actions are decreased meat consumption and changed patterns of *transportation* (FAO, 2006; SOU, 2005). The actions listed in the questionnaire also include actions, such as *recycling and being outdoors*[4**], that we as teacher educators in pre- and in-service courses have found to be very common for teachers and student teachers to mention when discussing actions for sustainability. The choice of the growing vegetables action is connected to the emerging trend of urban agriculture, which is of increasing importance given that over half of the world's population now lives in cities. The collecting litter and campaigning against littering actions have a strong tradition as part of the work of the Green Flag organisation. We have also considered whether an action is direct or indirect and chosen the actions so that both these aspects are represented, see list below. Another perspective considered is whether an action aims at individual or collective solutions and thereby takes place in the private or public sphere (discussed by e.g., Chawla & Flanders Cushing, 2007; Jensen, 2002; Kenis & Mathijs, 2012). Private sphere actions include actions at home such as saving energy, saving water and composting, or consumer actions such as reducing consumption of clothes, gadgets, etc., and choosing to buy eco and fair trade labelled articles. Actions in the public sphere, where the individual acts as a citizen, includes engaging with NGOs and engaging with political parties.

Through these choices we have strived to grasp diversity in motives for preferences for specific actions in teaching. The different kinds of actions were mixed in the interview guide and the order is given below with numbers after the different actions. The different actions in the interview guide were:

[4]In 'being outdoors' we refer to activities in the natural environment.

Direct actions: Recycling (1), Growing vegetables (2), Composting (3), Collecting litter (5), Reducing consumption of clothes, gadgets, etc. (8), Reducing meat consumption (9), Saving energy (12), Saving water (13), and Travel by bike and public transport rather than by car (14), which all relate to the private sphere.

Indirect actions: Information about eco/fair-trade labelling/goods (7), Influencing others to adopt a more sustainable life style (10), Campaigning against littering (6), Influencing decision makers (11), Engaging with political parties (15), Engaging with NGOs (16), where the first two actions relate to the private sphere and the others to the public sphere.

Being outdoors[5] (4)

Data analysis

Compilation and analysis of the empirical material was made quantitatively and statistically in Excel and SPSS. As two participants in the group of teachers did not answer all questions, 22 to 23 participants remain in the quantitative analysis of that group. The percentages of teachers and instructors respectively who included different actions in teaching practices were calculated in Excel. For the statistical analysis Friedman Tests (Tolmie, Mujis, & McAteer, 2011) were used as the data consists of ordinal variables, with the null hypotheses that no differences would appear between the rankings. Significant levels were set at 0.05 and 0.001 (two-tailed). From these tests the different quartiles (25th percentile, median, 75th percentile) were also collected as well as the mean ranks, and then the interquartile ranges were calculated. As the Friedman Tests showed that there were significant differences in the ranking of the different sustainability-promoting actions for each group of participants, and the null hypotheses could be rejected, post-hoc tests were conducted (Wilcoxon Signed Rank Test; Tolmie, Mujis, & McAteer, 2011) to compare the ranking of different actions with each other pairwise. To test for significant differences in ratings between the two groups, Eco-School teachers and instructors, the Mann-Whitney U-test (Tolmie et al., 2011) were used on three of the questions. The null hypothesis was: no difference in ratings between Eco-teachers and Eco-instructors, and alternative hypothesis: the Eco-instructors give higher ratings than the Eco-teachers. The significance level was set at 0.05 (one-tailed). It lies outside the scope of the study to analyse whether, in the teaching situation, the different practices are to be regarded as activities, behaviour or actions in the meanings of Jensen (2004). Hence, we view the different sustainability-promoting actions as different issues to include in teaching practices which aim at giving students knowledge of, and/or experience in, different action alternatives.

Results

In the following section the results from the quantitative analysis of the ratings are presented, first for the groups of teachers and instructors respectively, and thereafter as a comparison between the two groups.††

Teachers' rating

Of the 16 actions chosen for the investigation, a clear majority were considered to be appropriate by the Eco-School teachers for inclusion in educational practice, judged from the high ratings assigned to them, see Table 1. Only two of the actions received a

[5]*Being outdoors* is not categorised as either a direct or an indirect action, since it does not have direct impact on sustainability and is to be regarded more as an activity.

median rating of less than 4, implying that they were considered less appropriate:‡‡ *engaging with NGOs* and e*ngaging with political parties*. Results from the Friedman§§ Test showed that there was a significant difference in the ranking between the different actions (χ^2 (15) = 142.243 p < 0.001), and the post-hoc test (Wilcoxon Signed Rank Test) made it clear that the ranking of *engaging with political parties* was significantly different from the ranking of the other actions (e.g., *engaging with NGOs – engaging with political parties*, Z = -2.169 p = 0.030).

Of the five actions that were rated highest by the Eco-School teachers four were direct actions: *recycling*, *saving energy*, *composting, and saving water*. The indirect action that was rated highest – *being outdoors* – is ranked number two. Of the four actions that were perceived least appropriate for inclusion in teaching practices by the Eco-teachers, three were indirect: *engaging with political parties*, *engaging with NGOs* and *influencing decision-makers*; and one direct: r*educing meat consumption*. The two actions that were rated highest (*recycling* and *being outdoors*) received the same rating (6) from all teachers. The six actions that were rated lowest (*reducing consumption of clothes, gadgets, etc.*, *growing vegetables*, *influencing decision-makers*, *reducing meat consumption*, *engaging with NGOs*, and *engaging with political parties*), showed the highest variance in the ratings (interquartile range > 2).

Results from the question "*Have you included the action in your teaching practices*?" are presented as a percentage of all 24 teachers (Table 1). *Being outdoors* was the action most commonly worked with, while teaching about *engaging with political parties* was least common. There seems to be a correspondence between the percentages of teachers who state that they have worked with an action and its perceived appropriateness. For example, the indirect action *campaigning against littering* is rated lower than the direct action *collecting litter*. This expression of lower degree of appropriateness corresponds to the fact that *campaigning against littering* was less frequently included in the teachers' practices (only 43% of the teachers had used *campaigning against littering* in their teaching practices, compared to 83% of the teachers who had included *collecting litter*).

Table 1.

*Ratings assigned by Eco-School teachers to the different actions in response to the question: "How appropriate is the action for inclusion in teaching practices?" (n = 22). Results from the question: 'Have you included the action in your teaching practices?' are shown in per cent (n = 23). **

	Eco-school teachers Action	Appropriateness (mean ranks)	25th	Median	75th	Range (min-max)	Have included it in teaching practices (%)
1	Recycling	12.02	6	6	6	4	91
2	*Being outdoors*	11.64	6	6	6	2	100
3	Saving energy	10.98	5	6	6	2	91
4	Composting	10.50	5	6	6	3	74
5	Saving water	10.45	5	6	6	3	87
6	*Influencing others to adopt a sustainable life-style*	10.34	5	6	6	3	91
7	*Giving information about eco/fair-trade labelling/products*	10.00	4.75	6	6	3	65
8	Collecting litter	9.41	4.75	6	6	4	83
9	Travel by bike or public transport instead of car	9.25	5	5.5	6	4	74
10	*Campaigning against littering*	8.43	4	5	6	3	43
11	Reducing consumption of clothes, gadgets, etc.	7.75	3	5	6	5	65
12	Growing vegetables	*6.86*	*3*	*4*	*6*	*4*	*39*
13	*Influencing decision-makers*	6.23	2.75	4	6	5	43
14	Reducing meat consumption	4.84	*2.75*	*4*	*5*	5	26
15	*Engaging with NGOs*	4.73	2	3	5.25	5	17
16	*Engaging with political parties*	*2.57*	*1*	*2.5*	*4*	*5*	*9*

* A rating of 1 corresponds to "very inappropriate" and a rating of 6 to "very appropriate". The table displays mean rank, different quartiles (25th percentile, median, 75th percentile), and the range between minimum and maximum values. The actions are listed from top to bottom in decreasing grade of appropriateness described as mean rank. Indirect actions are presented in italics.

Instructors' rating

The majority of the actions were given high ratings by the Eco-School instructors (Table 2), showing that most of the actions are perceived as appropriate for inclusion in teaching practices. The median is 6 for 11 of 16 actions and only one action has a median below 4; *engaging with political parties*. The action seen as most appropriate by the instructors is *reducing consumption of clothes, gadgets, etc.*, which also has the smallest interquartile range (IR = 0) reflecting the instructors' broad agreement with this rating. The actions for which the rankings differ most among different instructors are *engaging with NGOs*, *engaging with political parties*, *growing vegetables*, *composting*, and *collecting litter* (interquartile range = 3, 2.5, 2, 2, and 2 respectively).

Table 2.

*Ratings assigned by instructors to the different actions in response to the question: "How appropriate is the action for inclusion in teaching practices?" (n = 9). Results from the question: 'Have you included the action in your teaching practices?' are shown in per cent (n = 9).**

	Eco-School instructors Action	Appropriateness (mean ranks)	25th	Median	75th	Range (min-max)	Have included it in teaching practices (%)
1	Reducing consumption of clothes, gadgets, etc.	11.44	6	6	6	1	100
2	*Influencing others to adopt a sustainable life-style*	*10.89*	*6*	*6*	*6*	*2*	*100*
3	Recycling	10.56	5.5	6	6	2	100
4	*Giving information about eco/fair-trade labelling/products*	*10.22*	*5.5*	*6*	*6*	*2*	*100*
5	*Being outdoors*	*10.06*	*5.5*	*6*	*6*	*2*	*78*
6	Travel by bike or public transport instead of car	9.83	5	6	6	2	100
7	*Influencing decision-makers*	*9.56*	*5*	*6*	*6*	*2*	*78*
8	Saving energy	9.33	4.5	6	6	2	100
9	*Campaigning against littering*	*9.00*	*4.5*	*6*	*6*	*2*	*89*
10	Collecting litter	8.44	4	6	6	2	100
11	Saving water	7.89	5	5	6	3	78
12	Reducing meat consumption	7.83	4.5	5	6	2	100
13	Composting	7.61	4	6	6	3	100

14	Growing vegetables	6.78	*4*	*4*	6	3	78
15	*Engaging with NGOs*	*4.22*	*2.5*	*5*	*5.5*	*4*	*67*
16	*Engaging with political parties*	*2.33*	*2.5*	*3*	*5*	*3*	*11*

* A rating of 1 corresponds to "very inappropriate" and a rating of 6 to "very appropriate". The table displays mean rank, different quartiles (25th percentile, median, 75th percentile), and the range between minimum and maximum values. The actions are listed from top to bottom in decreasing grade of appropriateness described as mean rank. Indirect actions are presented in italics.

Results from the Friedman Test showed that there was a significant difference in ranking between the different actions ($\chi^2(15) = 53.041$ $p < 0.001$), and the post-hoc test (Wilcoxon Signed Rank Test) made it clear that the rankings of *reducing consumption of clothes, gadgets etc.* were significantly different from the ranking of the actions from *reducing meat consumption* and all actions with a lower rating (*reducing consumption of clothes, gadgets etc. - reducing meat consumption;* $Z = -2.169$ $p = 0.038$), see Table 2. The action that was ranked lowest by the instructors, *engaging with political parties*, differs from the one ranked second lowest, *engaging with NGOs* ($Z = -2.169$ $p = 0.021$) showing how inappropriate the former was perceived. A majority of the instructors had included in their teaching practices all actions, with *engaging with political parties* as a clear exception (only 1 out of 9 or 11 %, reported including this action). For five actions; *engaging with NGOs, saving water*, *growing vegetables*, *influencing decision-makers*, and *engaging with political parties* the teaching experience was somewhat lower (6/7 out of 9; 71/78 %). The spread in the instructors' ratings is small for the actions that received high ratings, and larger for actions that received low ratings, showing that to a greater extent instructors share the same view of actions perceived as appropriate compared with actions perceived as inappropriate.

Comparative analysis of Eco-School teachers' and instructors' ratings

In comparing the Eco-School instructors' and Eco-school teachers' ratings of the different actions some differences were found. Instructors found the actions appropriate to a greater extent than the teachers, and the ranges were smaller in the instructors' ratings. There are statistically significant differences (Mann-Whitney U-test; Tolmie et al., 2011) between the mean ranks of the two groups for three actions, of which two are direct actions: *reducing consumption of clothes, gadgets etc.*, *reducing meat consumption*, and one indirect action: *influencing decision-makers*, and all of which Eco-School instructors ranked higher with a smaller interquartile range (see Table 3).

Table 3.

Ratings assigned by Eco-School instructors (In, n=9) and Eco-School teachers (T, n=22) to three different actions in response to the question: "How appropriate is the action for inclusion in teaching practices?". A rating of 1 corresponds to "very inappropriate" and a value of 6 to "very appropriate". In a Mann-Whitney U-test the differences in ratings between instructors and teachers were found significant at p<0.05 (*). IR, interquartile range.

	In	IR	T	IR
Reducing consumption of clothes, gadgets etc.	11.44*	0	7.75*	3
Influencing decision-makers	9.56*	1	6.23*	3.25
Reducing meat consumption	7.83*	1.5	4.84*	2.25

A comparison of the answers to the question '*Have you included this action in your teaching practices?*' shows statistically significant differences between the instructors' and teachers' answers for the actions *campaigning against littering*, *reducing meat consumption*, and *engaging with NGOs*, see Table 4. In all three cases the instructors had to a greater extent included the actions in their teaching practices.

Table 4.

Proportions of Eco-School instructors (In) and Eco-School teachers (T) who answered that they had included the different sustainability-promoting actions in their teaching practices (%). In a Mann-Whitney U-test differences between the answers from the two groups were found significant at p<0.05 (*) and p<0.001 (**).

	In	T
Reducing meat consumption	100**	26**
Campaigning against littering	89*	43*
Engaging with NGOs	67*	17*

Which actions do teachers and instructors find appropriate/inappropriate? Both teachers and instructors view direct actions as more appropriate than indirect actions, but teachers favour direct actions to indirect ones to a greater extent than the instructors. The same pattern emerged for actions in the private and public spheres respectively, as private sphere actions are viewed more appropriate by both groups than actions taking place in the public sphere, which aim at solutions on a societal level. Although both teachers and instructors find many actions appropriate to a high

degree, differences were discerned. The differences found were significant for the direct actions that concern consumption, i.e. private sphere behaviour: *reducing consumption of clothes, gadgets etc.*, and *reducing meat consumption*, which instructors found much more appropriate. This is also true for the indirect action *influencing decision-makers* that relates to the public sphere. However, both groups share the same view about which actions are least appropriate to include in teaching practice: two indirect actions aiming at solutions in the public sphere: *engaging with NGOs* and *engaging with political parties*.

Which actions have they included in teaching practices? The answers to the question about whether they have included the different actions in their teaching practices follow the same pattern as for which actions they found appropriate. Both groups had to a greater extent included direct actions rather than indirect actions, and private rather than public sphere actions. Instructors had to a higher degree included actions related to both the private and the public spheres, with significant differences for the direct and private sphere action *reducing meat consumption*, and the indirect and public sphere actions *campaigning against littering* and *engaging with NGOs*. Notably, both groups excluded the indirect and public sphere action *engaging with political parties* from teaching activities.

Discussion

An important part of the education for action competence includes giving students knowledge of, and/or experience in, different action alternatives for sustainability. This study explores how Eco-School teachers and instructors in Sweden view the inclusion of 16 different sustainability-promoting actions in teaching practices. The actions are chosen so that they represent both direct and indirect actions for sustainability, as well as actions aiming at solutions in the private and the public spheres.

To generalise the results, even though there are differences between the two groups, the Eco-School teachers and instructors found direct actions more appropriate than indirect actions, which is in contrast to the findings from studies of Danish schools where indirect actions seem to be the most widely taught (Jensen & Schnack, 1997). Many direct actions, for example recycling, reducing meat consumption and saving energy, can be classified as actions that aim for sustainability solutions at an individual level, in that individuals change their life-style patterns in the private sphere (Monroe, 2003). Consumer actions are seen by teachers as less appropriate than by the instructors, and consequently have been less used in teaching practices. Actions that may be able to change structural chains of events, and consequently target solutions at a public level, include the indirect actions influencing decision-makers and engaging with political parties. According to the results of the present study, the teachers' repertoires of actions comprise actions that for a long time have been part of an environmental friendly life-style in Sweden, and where the focus is on individual solutions in the private sphere. However, to work with actions from an action competence perspective (Jensen & Schnack, 1997) means not just doing different things, it also involves explicitly stimulating students to participate in debates, to strive for "insights into the social and structural problems and the conflicts of interest that underlie all environmental problems" (Lundegård & Wickman, 2007). To get students to experience actions as meaningful and not just do them, to make them see the web of social structures in which the actions are embedded, as well as causes and effects in a history-future time scale, may contribute to creating an environment in which young people are able to criticise and break with the predominant social norms

(Almers & Wickenberg, 2008), and to sustain these actions in the longer term (Almers, 2013). On the other hand, Short (2009) discusses the advantages, from a teacher's perspective, of concentrating on promoting individual actions in the personal sphere concluding that they are noncontroversial and safe, whereas mobilising students in the public sphere may be experienced as controversial and potentially rife with uncertainty. Also, despite a negligible environmental outcome, participation in an activity may be a first important experience in the development of a responsible and capable citizen (Short, 2009). However, the importance of student ownership over which actions are going to be taken is often stressed in relation to teaching which aims at developing action competence (Breiting and Mogensen, 1999; Jensen and Schnack, 1997; Short, 2009). The results of this study indicate that the teaching will add to students' repertoires of sustainability-promoting actions with a variety of actions in the personal sphere, while teaching focussing on actions in the public sphere is scarce. This lack of public sphere action in teaching limits students' options concerning what actions they might take. The picture is however not completely dark. While there seems to be some agreement among teachers and instructors respectively on which actions are most appropriate, for actions that are deemed less appropriate the answers diverge most, i.e. some of the teachers and instructors think these actions are appropriate. This suggest that some students might get the opportunity to discuss or experience a larger variety of actions.

Conclusions

Different direct actions, and actions which take place in the private sphere were viewed by Eco-School teachers and instructors as the most appropriate actions to include in teaching practices. However, actions related to individuals as consumers were seen by teachers as less appropriate than by the instructors, and have consequently been included less in teaching practices. The actions that were deemed least appropriate by both groups were two indirect actions occurring in the public sphere and aiming at solutions on a structural level, engaging with political parties and engaging with NGOs. Questions of what lies behind the varying views on the appropriateness of including different actions in teaching practices is beyond the scope of this paper, but are relevant and need further investigation. Still, if the results of this study reflect a common view among teachers on the appropriateness of including different sustainability-promoting actions in teaching practices, some possible consequences for students may be discussed. Offering students teaching that is limited regarding different action alternatives for sustainability may be a matter that has, at least, two facets. If the focus of teaching is on the individual's moral responsibility for action in the private sphere students will not acquire knowledge about different action strategies for the democratic change of social structures. The students may therefore risk becoming moral captives in the prevailing societal system (which may be emotionally very challenging), without knowledge about the complex chains of events that cause environmental problems, as well as different ways of acting to change them.

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Biographical statement

Ulrica STAGELL is currently a doctoral student in Curriculum studies concerning learning and sustainability and member of the Swedish National Graduate School in Education and Sustainable Development (GRESD). E-mail: ulrica.stagell@hlk.hj.se

Ellen ALMERS is a senior lecturer in education at the School of Education and Communication, Jönköping University where she, since 2010, leads the research platform Sustainable Development and Science Education. Her research interest is within ESD/EE/action competence. The title of her doctoral thesis (2009) is Action Competence for Sustainable Development - Three Stories about the Path Leading There. Ellen has a background as a science teacher (biology and chemistry) in lower and upper secondary school. E-mail: ellen.almers@hlk.hj.se

Per ASKERLUND is an associate professor in plant biochemistry and a senior lecturer in biology at School of Education and Communication, Jönköping University. His current research interests lie in the field of education for sustainable development. E-mail: per.askerlund@hlk.hj.se

Magnus APELQVIST is a lecturer in Biology, Global studies and Environmental sciences at School of Education and Communication, Jönköping University. His research interest is mainly in Entomology and ESD/EE. He has recently been involved in the ESSA-project (Ecosystem services and Strong Sustainability) creating the publication The Parts and The Whole. A Holistic Approach to Environmental and Sustainability Education. E-mail: magnus.apelqvist@hlk.hj.se

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RESEARCH ARTICLE

Ne Tür Eylemler Uygundur? Eko-Okul Öğretmen ve Öğretim Elemanlarının, Sürdürülebilir Kalkınma İçin Eğitim İçeriği Olarak Sürdürülebilirlik Teşvik Eylemlerin Sıralaması

Ulrica STAGELL*
Jönköping University, SWEDEN

Ellen ALMERS
Jönköping University, SWEDEN

Per ASKERLUND
Jönköping University, SWEDEN

Magnus APELQVIST
Jönköping University, SWEDEN

Özet

Farklı eylem alternatifleri ve stratejileri hakkında öğrenme düşüncesine dayalı sürdürülebilir kalkınma için eğitimi temelinde yapılan bu nicel araştırma Eko-Okul öğretmen ve öğretim elemanlarının farklı sürdürülebilirlik teşvik eylemleri de dahil olmak üzere öğretim uygulamalarında kullandıkları yöntemlerle ilgili görüşleri üzerinde durmaktadır. Öğretim uygulamaları en uygun eylemleri içerecek şekilde özel alanda gerçekleşecek doğrudan eylemler ve eylemlerin her iki grubu tarafından görüntülendi. Ancak, bireylerin, tüketici olarak yaptığı eylemler, eğitmenler tarafından daha uygun; öğretmenler tarafından ise daha az uygun olduğu ve dolayısıyla da öğretim uygulamalarına daha az dahil edildiği görülmüştür. Her iki grup tarafından en uygun görülen faaliyetler, siyasi partiler ve sivil toplum kuruluşlarının yapısal düzeyde çözümlerini hedefleyen kamusal alanda meydana gelen ilgi çekici, iki dolaylı eylem tespit edilmiştir. Sonuçlar özel alanda bireyin ahlaki sorumluluğunu vurgulamak ve toplumsal yapıların demokratik değişim için farklı eylem stratejilerini dışlama eğiliminde olduğunu göstermektedir.

Anahtar Kelimeler: Sürdürülebilir kalkınma için eğitim, eylem, öğretmen, eko-okul, sürdürülebilirlik.

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*Corrsponding Author: Ulrica Stagell, Jönköping University, School of Education and Communication, Box 1026, SE-551 11 Jönköping, Sweden, +46 (0)36 101360, E-mail: ulrica.stagell@hlk.hj.se

IEJEE Green