Abstract

The preconditions for education for sustainable development (ESD) differ according to contextual factors. This paper discusses the sources of values connected with sustainable development and also presents findings from a Swedish survey about how attitudes to some aspects of sustainable development are distributed among Swedish pupils. The result shows significant differences related to gender and educational programme. Boys and students in vocational programs hold stronger anthropocentric values than girls and students in theoretical programmes. There is also a positive correlation between solidarity and biocentric values. Comparison with earlier studies indicates that the differences mentioned above are increasing.

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1. Introduction

Education for Sustainable Development (ESD) and Socio Scientific Issues (SSI) are two educational approaches which aim to establish a holistic view on problems where environmental and democratic aspects are intertwined. Such learning challenges pupils’ underlying attitudes towards nature and towards fellow-beings. The preconditions for ESD/SSI education differ according to contextual and situational factors and a successful outcome is therefore dependent on knowledge about relevant contextual and situational factors. This paper will focus on three such issues. First, it looks at long-term stability and change in people’s general values on a societal Western level, second it considers how values and attitudes towards nature and towards fellow-beings were distributed among Swedish pupils in upper secondary school in 2009 and finally it provides a short summary and two questions for discussion based on what the first two issues elicit.

2. Sources of values and attitudes connected with sustainable development

People’s attitudes and actions reflect their values. Religion and ideology are two primary sources of values in our society. An understanding of changes in underlying values therefore requires some knowledge about how the influence of religion and ideology changes over time.

2.1. Religion

Findings from a European values study (Halman & Liijkx, 2009) shows that the impact of religion on values regarding public issues and the political sphere is diminishing but at the same time the religious factor is still relevant in the private sphere. Malik (2010) explains this by stressing that religion today has stronger impact as an individual and cultural identity builder than as a common value guide on a public level. Another aspect is that many new age religions have strong focus on individual well-being and hence Malik affirms that religion has become secularized and individualized. One consequence of that is that religious incentives today are more a matter of how to feel good individually than how to do good things together. This conclusion implies a dissonance in the theory of Inglehart (1997), given that we are facing a shift in contemporary Western values from materialism to post-materialism and that such a transformation is associated with a decline of religion in both private and public sectors (Halman & Liijkx, 2009).

2.2. Ideologies and emotions

Another source of common values on a public level is ideology. One function of an ideology is to imprint narratives about the future. Moisi (2009) argues that the impact of the classical ideologies shows a diminishing trend since the 1980s. He stresses that ideologies replaced national passions as narrative inspiration between the Russian revolution in 1917 and the fall of the Berlin Wall in 1989 but he does not draw the same conclusion as Fukuyama (1992), who argued that history itself had come to an end with the seeming victory of liberalism and capitalism. Instead of ideologies Moisi focuses on three primary emotions, hope, fear and humiliation, as elements in ongoing processes that constitute identities and form values. To sum up this introduction it is obvious that factors other than religion and ideology seem to be more and more important in creating the values that affect attitudes and actions in the young generation.
2.3. ESD and SSI in formal education

One purpose of the formal education system is to mediate essential values. Democracy is one such value. Educational policy documents from global to national and local levels also give priority to learning how to achieve sustainable development. ‘Few issues are so important but so elusive as sustainable development, and there can be very few such issues indeed where the role of learning is so crucially important to our future’ (Scott & Gough, 2004, p. xi). A need for change in human values is often expressed as a prerequisite for sustainable development and there are abundant suggestions about which values have to be changed in order to achieve sustainable development. This study takes its departure from the fundamental values underlying the Millennium Declaration of the UN. They are freedom, equality, solidarity, tolerance, respect for nature and shared responsibility (UN, 2000). Despite their importance not very much is known about how these values help or hinder sustainable development (Leiserowitz, Kates, & Paris, 2006) but studies from many different countries show that students’ primary concern is global environmental problems. Therefore it is important to know more about how these values are distributed among pupils and also how ESD/SSI can combine to support change in a sustainable direction and meet pupils’ concerns without yielding to manipulation and indoctrination. How does one as a teacher balance on the edge between ‘knowing what is right and knowing that it’s wrong to tell others what is right’? (Wals, 2010, p. 143).

3. Purpose of the study

Understanding the preconditions for learning about the social, ecological and economic dimensions of sustainable development requires knowledge about how values and attitudes linked to sustainable development are distributed among pupils. The purpose of this study is to measure attitudes towards nature and towards fellow human beings among Swedish pupils and to examine how these attitudes differ according to sex, educational programme and urban/rural living, and also to analyze how different attitudes correlate with each other and from which values they emanate.

4. Method

This is a quantitative, questionnaire-based study. A web-based questionnaire with 27 statements was distributed in November 2009 to 1,427 pupils, age 16, in nine upper secondary schools in Sweden. The selection of schools reflected national characteristics with regard to gender, rural/urban living and educational programmes. Each participating school organized an occasion when the classes could answer the questionnaire jointly. Thus all pupils received the questionnaire at their individual e-mail address; answering on another occasion was also possible. The statements in the questionnaire were divided into four groups. In each group there were from five to nine statements presented on a Likert scale from one to five (ranging from strongly disagree to strongly agree). The first two groups were intended to measure attitudes towards preservation and utilization of nature which reflected the value ‘respect for nature’. In this part I used the Environmental Perception (ENV) scale developed by Bogner and Wilhelm (1999) and further elaborated as the Model of Ecological Values (Wiseman & Bogner, 2003). Groups three and four were intended to measure attitudes connected with solidarity and equality, two other values underlying the Millennium Declaration. For these parts of the questionnaire a new scale (MSV), Model of Social Values, was constructed with the ENV scale as a model. Owing to insufficient internal consistency the statements regarding equality are not included in the presentation below. The answering frequency was 64.2 per cent (n=943). Reduction owing to item non-response was 26, so 917 respondents was the empirical body for analysis. This comprised approximately 1 per cent of all pupils in the first year of upper secondary school in Sweden. In the initial analysis Cronbach’s alpha was used to measure the internal consistency or reliability. Pearson r (Pearson product-moment correlation coefficient) was used to measure the correlation between two variables and t-test was used to ensure that discovered differences were statistically significant.

5. Findings and results

5.1. Gender-related differences

Biocentric values are more common among girls (n=466) than among boys (n=451). Girls’ intention to support nature is significantly stronger. Twenty-seven per cent of the girls agree with ‘I would help raise money to protect nature’. The boys agree to half that extent. Girls also agree nearly twice as much as boys to a statement concerning enjoyment of nature. Boys hold stronger anthropocentric values and are more positive about utilization of nature than girls. In an item concerning human dominance over nature, ‘People are supposed to rule over the rest of nature’, 18 per cent of the boys agree but only 6 per cent of the girls. The findings mainly
correspond to earlier studies but also indicate a wider gap between boys and girls compared with these earlier findings. Girls also have more positive attitudes to show solidarity with a wide in-group of others. This is significant on both individual and societal levels. In the statement ‘I can give money to help people in a poor country’ 60 per cent of the girls and 29 per cent of the boys agree. Forty-four per cent of the girls and 26 per cent of the boys agree with ‘Sweden has a responsibility to help poor people in poor countries’.

5.2. Differences between educational programmes

Pupils studying science programmes (n= 301) and social science programmes (n=347) taken together hold stronger biocentric values than pupils studying vocational programmes (n=269). In statements regarding intention to support nature pupils from the theoretical programmes agree twice as much as pupils studying vocational programmes. Eleven per cent of the pupils from vocational programmes, 22 per cent of pupils on science programmes and 27 per cent of pupils studying social science programmes agree with ‘I would help to raise money to protect nature’. There are only small differences between the programmes regarding anthropocentric values. The level of agreement with the statement ‘People are supposed to rule over the rest of nature’ differs very little (range from 10 to 13 per cent) between the three programmes. Statements regarding solidarity however show significant differences. Fifteen per cent of pupils in vocational programmes say they are ready to give 10€ per month to build schools in Afghanistan whereas 24 per cent of pupils studying social science and 21 per cent of science pupils agree. Twenty-four per cent of vocational pupils agree with ‘Sweden has a responsibility to help poor people in poor countries’ whereas 43 per cent of social science pupils and 38 per cent of science pupils agree with this statement.

5.3. Differences between pupils living in the country and in a big town/city

There are no or only small differences in biocentric values according to urban/rural living. Twenty-seven per cent of the pupils living in a big city (N=647) agree with the statement ‘I try to tell others that nature is important’. For pupils living in the countryside (N=162) the proportion is 21 per cent. Statements regarding enjoyment of nature have the same support in the city as in the rural areas. Some aspects of anthropocentric views are notably stronger among pupils in the city. Twenty-seven per cent of the city pupils agree with ‘Weeds should be killed because they take up space from plants we need’ and 18 per cent of pupils from the country agree. Attitudes towards solidarity also show marked differences. Rural pupils agree at 29 per cent and city pupils agree at 44 per cent with ‘I would help raise money to help poor people in a country far away’. Fourteen per cent of rural pupils are ready to give 10€ per month to build schools in Afghanistan whereas 22 per cent of the pupils from the city agree to this. Thirty-four per cent of rural pupils and 23 percent of pupils from the city agree with the statement ‘It’s more important to help countries near us than to help countries far away’. Another statement regarding solidarity on global level is: ‘Sweden has a responsibility to help poor people in poor countries’; 25 per cent of rural pupils and 38 per cent of pupils from the city agree with this.

5.4. Correlations between values

Pupils with positive attitudes towards preservation of nature also have positive attitudes about helping poor people in a wide in-group of others. For the total population (n=917) this is expressed in a positive correlation (r = 0.39) between biocentric and solidarity values. Pupils with more positive attitudes to utilization hold more anthropocentric values. The positive correlation between anthropocentric values and solidarity are very weak (r = 0.09).

6. Conclusions and questions

The results from this study mainly confirm findings from earlier studies that girls show greater environmental concern than boys (OECD, 2009; Oscarsson, 2002; Tuncer, 2009; Uddenberg, 1995). Girls are also more concerned about social injustice, show stronger empathy and explain poverty in structural terms more often than boys (Oscarsson, 2005). Compared with earlier studies this study indicates an increasing difference in attitudes regarding sustainable development of boys and girls. This has to be researched further to be corroborated. There is also a gap in attitudes between theoretical and vocational programmes. School reforms in Sweden are now reducing the elements of citizenship in the curriculum for vocational programmes. Because of that the gap between theoretical and vocational students may also widen in the future. Sweden and many other countries also face widening gaps between urban and rural living conditions. We also have to face the diminishing influence of ideologies and religions, mentioned in the introduction, as inspiration for strategies, visions and utopias on a public level. Two questions following on from that are:
• How can ESD/SSI meet the differences in values regarding sustainable development between boys and girls, between town and country and between theoretical and vocational programmes?
• How can ESD/SSI compensate for the diminishing influence of religion and ideology as wells of inspiration on a public level without yielding to indoctrination and manipulation?

References


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