Environmental Education Research

ISSN: 1350-4622 (Print) 1469-5871 (Online) Journal homepage: https://www.tandfonline.com/loi/ceer20

The Action Competence Approach in Environmental Education

Bjarne Bruun Jensen & Karsten Schnack

To cite this article: Bjarne Bruun Jensen & Karsten Schnack (1997) The Action Competence Approach in Environmental Education, Environmental Education Research, 3:2, 163-178, DOI: 10.1080/1350462970030205

To link to this article: https://doi.org/10.1080/1350462970030205

The Action Competence Approach in Environmental Education

BJARNE BRUUN JENSEN & KARSTEN SCHNACK *The Royal Danish School of Educational Studies, Copenhagen, Denmark*

SUMMARY *In this article, the concept of action competence is presented and an attempt is made to locate it within the concept of general educational theory. The concept of action competence, it is argued, should occupy a central position in the theory of environmental education as many of the crucial educational problems concerning a political liberal education are united in this concept. The preoccupation with action competence as an educational concept is based on scepticism about the educational paradigm in environmental education which manifests itself partly in a marked tendency to individualisation and partly in a tendency to regard the educational task as a question of behaviour modification. At the same time, action competence should be seen as a necessary alternative to the traditional, science-oriented approach to environmental education. Examples from developmental work in Danish schools are used to clarify and demarcate the concept of 'action' from 'activity' and 'behaviour change'. Different kinds of actions are discussed, environmental actions are identified and a distinction is drawn between 'direct' and 'indirect' environmental actions. Finally, four problem areas are identified which require future research.*

Introduction

This article deals with the concepts of action and action competence associated with environmental education. One of the overall objectives of environmental education is to build up students' abilities to act—their action competence—with reference to environmental concerns.

The concept comprises two components: an analysis of the nature of environmental problems and an idea of education as something more than academic schooling or behaviour modification. As environmental problems are becoming some of the big challenges to democracy and humanity it is of the greatest importance critically to reflect upon their pedagogical implications.

1350-4622/97/020163-16

The fundamental assumption is that environmental problems are structurally anchored in society and our ways of living. For this reason it is necessary to find solutions to these problems through changes at both the societal and the individual level. This is why the aim of environmental education must be to make present and future citizens capable of acting on a societal as well as a personal level. This assumption about the root causes and anchorage of environmental problems has many consequences for the objectives, content and processes of environmental education.

Our point of departure is that relevant answers to environmental problems are not only a matter of quantitative changes (less consumption of resources, less transport by car, less electricity consumption, etc.), but also (and maybe more so) of qualitative changes. Therefore, the aim of environmental education is to make students capable of envisioning alternative ways of development and to be able to participate in acting according to these objectives.

Another part of the challenge is the widespread concern about the increasing environmental problems existing in our societies. There has been a lot of discussion in connection with environmental education about whether creating anxiety and worry in children is wise or useful. Studies made in several Nordic countries in recent years indicate that this is an inadequate way of presenting the problem. It is not so much a question of *creating* anxiety during environmental education. The problem is more how to handle the anxiety and worry which students already feel. So the question, then, is not whether we dare create anxiety in children, but whether we dare let that anxiety and worry, which of course exists, remain undiscussed.

Of course it can be worrying that working with these complex and very often global problems could result in pupils who are unable to take action when what we need is exactly the opposite. Therefore, there is a need for a form of teaching from which pupils acquire the courage, commitment and desire to get involved in the social interests concerning these subjects (naturally based on understanding and insight). They have to learn to be active citizens in a democratic society.

The concept of 'action competence' has occupied a central position in the work of the Research Centre for Environmental and Health Education at the Royal Danish School of Educational Studies (Jensen & Schnack, 1993, 1994; Jensen, 1994, 1995; Mogensen, 1995; Breiting & Nielsen, 1996). Many of the crucial educational problems concerning a political liberal education are united in this concept. Thus, the concept does not have the answers in itself, but rather indicates the direction of, or gives a perspective on, the questions.

The concept of action competence is presented below. First, an attempt is made to locate it within a discussion of general educational theory. On the basis of trends and perceptions of action and action competence in the sphere of environmental education, the way is opened for a discussion of the limitations and perspectives of the concept. The goal is to elucidate and define the concept with a view to future discussion. Finally, the discussion focuses on a number of problem areas which require future research.

Action Competence and Democracy

Questions of educational theory concerning action competence are of a completely general nature and, naturally, must also be analysed as such. However,

such questions are particularly important in education concerned with development issues across the world. It is true that it is not just in such contexts that an interest is taken about competences and action tools which teaching aims to develop, but these spheres seem to be particularly subject to educational short circuiting of the type where practice is reduced to technique.

This is shown partly in a marked tendency to individualisation and partly in a tendency to regard the educational task as a question of the modification of behaviour. In some of the development work in recent years in the Danish 'Folkeskole', the municipal primary and lower secondary school, we see, just as in the many campaigns in and outside the school, a preoccupation with changing pupils' behaviour or inculcating better habits in them in relation to, for example, consumption of water and electricity, waste of different types and eating, exercise and smoking habits. In this connection, there is also often talk of provoking changes in attitude which, naturally, in some way or other, is a significant part of all teaching.

Our preoccupation with action competence as an educational concept must be understood on the basis of scepticism in the face of this whole educational paradigm.

We, too, believe that humanity is facing great challenges in relation to the environment, health and peace. These challenges, which have always existed, take many forms and do not seem to be becoming any easier. This must have educational consequences, but before we deduce these too quickly, two other equally important premises must be brought into place.

First, it is not and cannot be the task of the school to solve the political problems of society. Its task is not to improve the world with the help of the pupils' activities. These activities must be evaluated on the basis of their educational value and thus according to educational criteria. A school does not become 'green' by conserving energy, collecting batteries or sorting waste. The crucial factor must be what the students learn from participating in such activities, or from deciding something else.

Second, concerns about the environment, health and peace must be coupled with a corresponding concern for democracy. Education for democracy, or political liberal education, is, in itself, a fundamental educational task. We do not believe in educational efforts in relation to the environment, health and peace which are divorced from this fundamental perspective.

Democracy can and must be decided in many ways, which, among other things, pertain to liberty, equality and solidarity. But it can also be said that democracy is participation. In a democracy, the members are not spectators, but participants; not equally active participants in everything all the time, naturally, but always potential participants who decide for themselves in what and when they will be involved. Education for democracy is thus also socialisation and qualification for the role of being a participant.

It is in this light that the concept of action competence should be seen. Developing action competence becomes a formative ideal in a democratic approach to education.

'Competence' is associated with being able, and willing, to be a qualified participant. 'Action' needs to be interpreted in relation to the whole range of distinctions concerning behaviour, activities, movements, habits, and, then, actions. Actions can actually consist of the same happenings as these other

constructs, but differ from them in that actions are characterised by the fact that they are done consciously and that they have been considered and are targetted. This also means that actions must be understood and explained with reference to motives and reasons, rather than to mechanisms and causes (Schnack 1977, 1994). Perhaps, it can be best expressed briefly by saying that actions are intentional.

Action, Experience and Liberal Education

The concepts of action and competence clearly go well together. In an expression from the philosophy of the late Wittgenstein, we are in a 'language game' that also contains concepts such as 'experience', 'authority' and the critical humanist concept of liberal education. Similarly, we have re-established the concept of liberal education in critical educational theory in opposition to the tendency in the post-war years to reduce practice to technique. This can be seen in Bent Nielsen's words:

> In liberal education, over and above insight in a sphere of knowledge, there lies the fact that a criterion has been established for utilization of that knowledge, that one has accepted a responsibility for how, when and for what one will use this knowledge. (Nielsen, 1973, pp. 40–41)

This is also seen in Jon Hellesnes's differentiation between conditioning and education as two forms of socialization:

> Conditioned-socialization reduces humans to objects for political processes which they do not recognize as political; a conditioned human being is thus more an object for direction and control than a thinking and acting subject. Education means that people are socialized into the problem complexes pertaining to the preconditions for what occurs around them and with them. Educational-socialization emancipates humans to be political subjects. (Hellesnes, 1976, p. 18)

The last quotation contains a characteristic, perhaps actually defining, feature of the liberal educational concept in critical educational theory. 'Critical' in this tradition does not, of course, mean 'to be in opposition' or 'negative' but, on the contrary, to have an interest in analysing underlying structures, conditions and preconditions for the appearance of the phenomena (Schnack, 1997).

This use of language also applies to critical teaching on the basis of experience. Experiences are here attributed great importance, on the basis that, as regards personality, experiences form very deep-lying structures in our understanding of the world, and in our practice (Schnack, 1981).

Experiences are the results of actions performed on the basis of previous experiences which are the result of other actions, etc. This is the situation Dewey calls the 'continuity of experience' (Dewey, 1938). That experiences and actions are thus very closely linked is a further reason to be interested in action competence. However, experiences at the same time reflect the categories in which we understand the world at a given point in time. They are interpreted and conceptualised impressions.

Experience has a particular relationship to action. While knowledge can be transferred to a person without it being possible to say that the person acts in relation to this knowledge to any appreciable extent, it is the case that one has

had to act on the experiences one acquires. The characteristic feature of an action is not that one performs a physical activity, but that there is an intention in the actor. Thus, there must be an effort to achieve something before it can be said that one acts (Jacobsen *et al.*, 1980, p. 28).

However, the goal of the act is not normally identical with the content of the experience. The Danish psychologist, Torsten Ingemann Nielsen, expressed this very precisely in his thesis on action understanding, in the following manner:

> It is during the conflicting confrontation between the action content that is intentional and intended, on the one hand, and the unintentional and unintended action outcome that appears after the act, on the other hand, that people develop their action understanding and their action potential. (Nielsen, 1978, p. 136)

Experiences and actions are thus very closely linked. Without action competence, one cannot become rich in experiences, which in their turn can help to qualify action competence.

The Action Concept in Environmental Education

In many schools' environmental education programmes the idea of involving the action perspective or, as it is often described, to work in an action-oriented way, is becoming increasingly important. There are several very different reasons for this, of which four will be mentioned here.

First, the dominance of scientism in environmental education, where the focus is often on giving pupils knowledge about the seriousness and extent of the environmental problems, has not been capable of addressing the social and societal perspectives involved in questions about the root causes of problems and the action possibilities which are open to society and the individual.

Second, an awareness that moralising, behaviour-modifying teaching rarely if ever leads to intended behavioural changes has re-focussed attention on 'action' in teaching.

Third, growing criticism of schools because of the priority they give to the academic dimension at the expense of the more practical has led to increased attention being given to 'action oriented' approaches.

Fourth, criticisms of simulations, games, role plays, etc. and their often artificial 'as if' situations, has led to increased demands for authenticity and, thus, also for participation in the reality of society as part of teaching.

These reasons for focussing on action-oriented teaching are of a completely different nature. This means that the concept is far from having an unequivocal meaning in educational practice and discussion. However, in the following section, a definition of the action concept is identified. A particular point is made about the need to demarcate action from behavioural change and activity respectively.

Action versus Behaviour Change

There are increasing tendencies to equate action with behavioural change in the educational context. For example, it is often said that knowledge does not necessarily lead to the intended behavioural changes and that other means of

education are necessary. However, this admission does not lead to the goal of behavioural manipulation being reconsidered. Instead, increased research and development effort is concentrated on other and more efficient strategies for influencing pupils' behaviour. The preparation of smart 'fashionable advertisements' about the 'right' behaviour and using the teacher more consciously as a role model are examples of this.

All these attempts are characterised by efforts being made to influence pupils directly, outside the 'knowledge component', and, thus, not necessarily allowing them to make up their own minds and decide on the intended behavioural change. The goal is that pupils, within nearly all available means, should change their behaviour in a previously determined direction.

However, this is exactly where there is an important difference between behavioural change and action. This is the same difference as that between the two fundamentally different goals for environmental education: behaviour modification and action competence. Related to an action, there will always be a conscious making up of one's mind, while this is not necessarily the case with a behavioural change which could be caused by pressure from other people (e.g. a teacher or peers) or by other influences such as advertisements.

Even when a teacher in an interview on the action approach in environmental education says (Jensen & Nielsen, 1996, p. 122) '... I do really try to change the pupils' behaviour ... ', it is not necessarily correct to say that the pupils are acting even if their behaviour changes. And such behavior-modifying teaching will presumably not even contribute to the development of the pupils' environmental action competence. In this case it is the teacher who is the actor (acting upon the pupils).

The first element in the definition of action is exactly that one decides to do something, alone or together with others, whether it is a question of a change in behaviour or an attempt to influence the conditions of life.

Action versus Activity

Another strong tendency in environmental education is that, often as a reaction to the rather academically oriented content, different practical activities are incorporated into teaching (Christensen & Schnack, 1991). In many contexts this is described as 'action oriented'. These activities can consist of excursions to more or less untouched natural areas, physical, chemical and biological investigations of a polluted water course, etc.

These various activities are obviously valuable and productive to the extent that they help motivation and the acquisition of knowledge but, in order to be characterised as actions, they must be addressed to solutions of the problem which is being studied.

For example, in the study of problems connected with fertiliser consumption in agriculture, investigating the amount of nitrate in drinking water could not therefore be characterised as an action, but rather as an activity (which, as mentioned, can easily be of value in the educational context). An example involving the action perspective in this sphere would be to explore ways of promoting products from organic agriculture or boycotting products from conventional agriculture and in that way aim at solving the problems of nitrate pollution (Jensen, 1991).

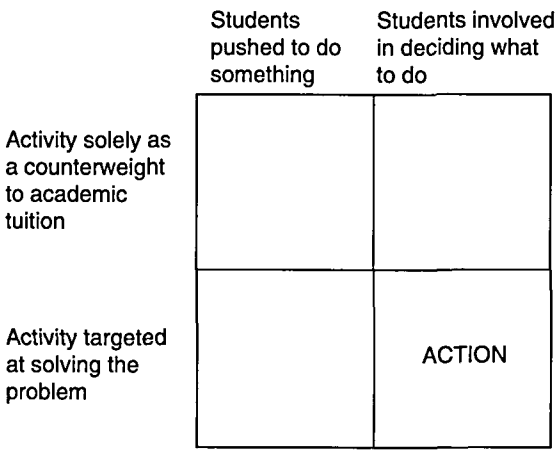

FIG. 1. Criteria for an 'action'.

In other words, an action must be targeted towards solutions of the problem that is being focused upon. The focus must be a change perspective. This is the second element in the definition of action. Thus, the fact that a class, for example, cleans dirt and waste from a beach could not be characterised as an action if the problem in question is pollution of the marine environment. Even though cleaning the beach leads to the immediate disappearance of certain of the polluting elements that originate in the sea, the activity will not have any effect on the problem because the activity does not address the causes of the problem, but, on the contrary, is focused solely on its symptoms. It cannot, therefore be characterised as an action against the environmental problem in question.

The above-mentioned criteria for actions can be summarised in the table shown in Fig. 1 (modified from Jensen & Schnack, 1994). The horizontal dimension concerns the boundary between behaviour and action and, thus, the question of whether the pupils themselves decide to 'do something'. The vertical dimension concerns the difference between activity and action and thus focuses on whether what 'is done' is addressed to a solution of the actual problem or not.

Different Kinds of Actions

Discussions concerning the differences between action and activity in the context of school practice makes it clear that there is a need to further differentiate and define these terms, especially in connection with meeting the demands for defining the concept of action when this includes a problem solving aspect.

For example, if pupils of their own accord decide to examine the degree of pollution of a stream and, thereafter, set up chemical and biological analyses we can ask ourselves whether this can be regarded as an action. In fact 'yes' could be the immediate answer to this question, as both demands for an action have been met: the pupils have made their own decision to carry out the examinations and these are geared toward solving the problems concerned through learning more about the extent and prevalence of the pollution in question.

One case study from the pilot study within the MUVIN project ('Environmental Education in the Nordic Countries') (Breiting & Janniche, 1995) illustrates this issue (Jensen & Nielsen, 1996). The upper secondary students who studied nitrate pollution decided to compare conventionally grown vegetables with organically produced ones with reference to the amount of nitrate residues found in each. The examinations, however, showed no immediate difference. This resulted in the pupils arguing that organically produced vegetables ought to be bought for their environmentally friendly cultivation in comparison with conventional cultivation, which pollutes surface water and ground water with pesticides and nitrate. In other words this action led to a clearer problem formulation and, thus, to a clearer argument for supporting organic farming.

At another school in the same project students in the 8th grade worked on the controversial project to build a bridge across the Great Belt (Storebælt), between the island regions of Denmark: Zealand and Funen. A group of pupils decided to look into adults' and pupils' opinions about the bridge and used interviews and questionnaires in their study. The examinations later resulted in a letter being sent to the Minister of Traffic and the Minister of Environment.

It might therefore be relevant to distinguish between the actual environmental actions and those which could be referred to as 'investigative actions'. If it is decided that the content of nitrate in drinking water should be tested this can be called a scientific investigative action, whilst interviewing different persons about their opinions of a certain environmental problem can be characterised as a social investigative action. For instance, the example above from the upper secondary school illustrates scientific investigative actions while the activities by the 8th grade can be labelled social investigative actions. These activities can all be characterised as actions, but only those actions geared toward solving a specific environmental problem can be described as environmental actions.

Environmental actions are usually the discussion topic in connection with the future developments of environmental education. An action-oriented environmental education could be defined as education which implies that working towards developing *environmental* actions is an essential element. It should be pointed out, however, that such an education will undoubtedly contain activities that are not actions, as well as actions that are not environmental actions.

Direct and Indirect Environmental Actions

This section deals with the different foci of environmental actions. Environmental actions can be grouped into two main categories: (i) actions which directly contribute to solving the environmental problem that is being worked on: (ii) actions whose purpose is to influence others to do something to contribute to solving the environmental problem in question (indirect environmental actions). In other words, indirect actions are characterised as dealing with 'people to people' relations, while direct actions refer to relations between people and their environment. In practice, sometimes these categories can be combined, as direct actions may be taken also to influence and convince other people.

An example of a direct action could be a farmer who decides to halve his consumption of fertilisers, whereas the laws and taxes legislated by politicians to influence the farmer into doing this can be described as indirect actions. The politicians' actions can also be seen as a result of the indirect actions of public

groups, such as letters of protest, demonstrations, lobbying, voting, etc. Perhaps the indirect environmental actions of public opinion have been influenced by other indirect actions, such as debate evenings on agriculture and environment arranged by a class working on agricultural environmental problems. In other words indirect actions lead to direct actions and a direct action will typically be caused by a series of indirect environmental actions.

Examples of direct environmental actions include sorting of garbage, construction of compost heaps, economising on water and energy consumption, etc. Examples of indirect environmental actions are the preparation and distribution of a newspaper concerning the environment, letters to politicians and companies, organising debate evenings on environmental conditions, editorials to the local paper, etc.

From various development projects with Danish schools on environmental education it appears that indirect actions are by far the most common in schools. Furthermore, it seems to be a tendency that direct actions such as establishing compost heaps are often directed at the immediate local community, while indirect actions are involved when working with problems of a regional and global nature (e.g. working on a folder about abolishing the use of PVC).

In previous paragraphs the distinction between the so-called investigative actions and environmental actions was discussed. One could perhaps argue that social investigative actions, such as interviews, can be of an environmental action nature. When pupils, for example, decide to test the farmer's knowledge and attitudes about environmental problems caused by agriculture by means of questionnaires and interviews, there is hardly any doubt that these activities in themselves influence the farmer. Therefore, these social investigative actions can to a certain extent be characterised as indirect environmental actions. The borderline is in any case vague. The same is not true of scientific examination actions, which can rarely be characterized as environmental actions and need to be followed by social investigative actions if they are to contribute to environmental action.

From the fact that indirect actions seem to be the most frequent type of actions one might get the impression that the indirect ones appear to be either considered as more valuable or as the least complicated ones to initiate for teachers and students.

It is possible to evaluate the worth of direct versus indirect actions from two perspectives. Firstly from an environmental point of view, it may be discussed which of the two types of environmental action as part of class teaching can contribute best to solving the environmental problem in question and, secondly, from an environmental educational point of view, it is a question of the degree to which students can develop their action competence through both types of environmental actions. This last issue will be addressed in the following section.

Environmental Actions seen in Relation to Action Competence

The traditional, science-oriented approach to environmental education has been criticised for leading to knowledge about the existence of environmental problems, about their scope and size, but still not leading to action competence. Education such as this, where pupils are overwhelmed with knowledge and

investigations about how bad things actually are, can contribute to the feeling of powerlessness felt by many young people, as reported by for example Hillcoat *et al.* (1995) in their study of attitudes and knowledge of young people aged 15–17 years in Brisbane, Australia.

While we argue that the action perspective ought to be brought into environmental education, at the same time we must stress that too great a focus on the action perspective and on specific actions in environmental education can have its own problems. If the actions that are set up only deal with the individual or school level (as in building a compost heap only for the use of the school or turning out the lights on leaving the classroom) we run the risk of teaching pupils a simplistic and individualistic approach to environmental problems and their causes. Does the action of turning out the light when leaving the room necessarily give more insight into problems concerning energy consumption and change of climate? Or more to the point: how does one ensure that the specific action contributes to developing pupils' critical and global understanding of the environmental problem in question?

If environmental-based action competence among other things means that insight into solving environmental problems requires social and structural changes, then major demands are put on the teacher's ability to put individual actions and their potential into perspective, both locally and globally. Otherwise, the focus on actions in environmental education might even counteract the development of students' action competence.

Perspectives to be included in such teaching are illustrated by the following questions: which environmental problem does the actual action help solve?, does a solution to the problem require that many act in the same way?, what are the conflicts of interests involved?, are there conditions that make many choose not to act in this particular way?, what can be done to make it possible for more people to act?, are there other sources or conditions in society which are more important with reference to the actual environmental problem?

The same claims for putting things into perspective must be raised in connection with projects which target indirect actions toward, for example, politicians, companies or other institutions in the local and global community. Such actions will often come across barriers caused by deficient response or no response at all. If actions such as these should result in increased action competence, then teachers need to put these barriers into perspective in order for the teaching not to lead solely to incompetence and indifference.

In a follow-up interview, students from a Danish school involved in the MUVIN project indicated that they have very little faith in being able to influence politicians:

> Interviewer: Do you think that we can do anything about the politicians?
> Pupil: No, but we can do something about the people—they do not know anything about it—then they can ... there is one area where one could do something ... you cannot do anything about the politicians ... only with the help of many people. (Jensen & Nielsen, 1996, p. 141)

In this case, a previous negative reaction from two Ministers to a letter from the class has probably contributed to the pupils developing and realising the need for alternative methods of action, such as working with social movements and

community groups. In many ways this was a constructive reaction, but we need to learn more about how different barriers are put into perspective so that the education does not solely lead to powerlessness and indifference.

To sum up, it can be concluded that several conditions should be provided in order for environmental actions within environmental education classes to contribute to developing action competence. A critical perspective is necessary and must be related to a concrete action. Additionally, the actions that are initiated must be directed at, and also put into perspective of, the problem that is being worked on. Furthermore, one gets the impression, after many discussions with students, that collective actions are both important and necessary if one really wants to change things. It appears that age makes no difference to this point, as both many upper secondary students and younger ones talk about the necessity of acting together. For example, in answer to a question about whether one can do anything about the problem of over-packaging, a girl from a 4th grade class replied:

> Yes, if many people think of it—we could use less packaging—if there were many people, we could tell it to the local government and then maybe they could do something about it. (Jensen & Nielsen, 1996, p. 142)

Aspects of Action Competence

Several Danish school development projects within the area of environmental and health education have pointed out a number of important components of the action competence concept. Besides skills at a more general level, such as the ability to cooperate, read and make oneself clear, these are:

- knowledge/insight;
- commitment;
- visions;
- action experiences

Knowledge and insight are concerned with pupils' acquiring a coherent knowledge in the field: a knowledge about what the problems are, how they arose and what possibilities exist for solving the problems. It is a challenge for environmental education to create different kinds of coherence in the fragmented knowledge which is presented by the media, etc. The critical dimension of this component is important and future research might point out critical sense and critical thinking as a separate component.

Commitment relates to promoting the pupils' motivation, commitment and drive. Assertiveness is also part of this component. It is important to be aware of, and to work with, this aspect when teaching, since knowledge about environmental problems cannot be transformed into action if courage and commitment are not present.

The third component deals with developing visions of how the conditions which one works with and would like to change might look in the future. This point deals with the development of pupils' ideas, dreams and perceptions about their future lives and the society in which they will be growing up.

Having visions about the good life and future worlds is an important part of being action competent.

The fourth component, action experiences, stresses the benefits of taking concrete action during teaching at school. It will, of course, be worth discussing whether or not one is prepared to go so far as to claim that environmental actions in relation to the problem one is working with should always be part of the teaching. Anyway, connecting emotions, values, knowledge and action is an important part of the educational process.

At the School of Educational Studies in Malmö, Christer Karlegärd and a group of teachers have implemented educational development work with a historical environmental content (Karlegärd & Toftenow, 1990). For example, the students have investigated the history of the air in Fosie in the south eastern part of Malmö. These pupils know more than most experts about this interesting subject and they have gained experience about how persons, as ordinary citizens, acquire insight and transmit their views.

So the action perspective can be within the established framework of the democratic system or extra-parliamentary activities, such as air pollution defence, which has appeared in Gothenburg recently, where mothers of children in kindergartens tried to stop cars at the approach roads on the days when children are not allowed to play out of doors because of air pollution-related health problems.

How far can, will and dare we go with regard to actions which are integrated within teaching? We will let these questions remain open, but are inclined to say we should dare a lot, as long as the objectives are of an educational nature! However, it is not the task of the school to improve the world by means of children's activities. Actions must be judged in relation to their educational value.

Issues for Future Research

The aim of this final section is two-fold. By presenting the following issues we summarise the main points of the previous discussion about the concepts of action and action competence and the appropriate educational challenges. Furthermore, the aim of this section is to open and stimulate discussion concerning future research and, consequently, many of the key issues are addressed as research questions.

The Components of Action Competence and their Relationship to Subjects in the Curriculum

A further discussion of the components included in the concept of action competence is needed for several different reasons. One reason is that it is a prerequisite for deliberations if the actual concept is to become operational. It is also necessary to identify the styles and content of teaching that help to develop action competence.

There seems to be broad agreement that both knowledge and commitment are necessary components, but these elements are often isolated and can directly counteract each other. Thus, we need to investigate whether people who are

crammed with unrelated knowledge of a scientific nature do not simply lose the will and desire to act in the spheres of, for example, health and environment.

Several other components of action competence have been proposed: insight, skills, courage, action experience, trust in one's own power to influence, etc. The next step must be a more detailed specification of these elements and an explanation of their mutual connection. What arguments can be used for the importance of these components and their mutual relationship? What significance can be attributed to empirical investigations in this connection?

Is action competence always the same or is it something different in relation to music, health, foreign languages, environment, mathematics, sport, science or media? Does action competence consist of different components each specifically linked to such subjects?

The question can be asked whether it is possible (or desirable) to aim at a situation where all actions are done on the basis of the acquisition of a thorough insight and consequent decision making within the sphere in question. Can trust in people and/or institutions be accepted as a basis for following action instructions from them? If so, it must have consequences for work in teaching about 'trust'.

Another central question is whether work can be done to realize the different components of action competence if they are not developed together in teaching. For example, is it possible to transfer the commitment that may have been built up in work in the creative sphere to developing action competence in connection with teaching that may cause anxiety in the environmental sphere? Or is it a necessary challenge to develop new ways to work with the problems of society which at the same time support, stimulate and develop commitment and drive?

Is it possible, and productive, to determine basic values on which action competence must build? Arguments are frequently met about the necessity (for our culture or our democracy) of common references and a common basis. However, it is a long way from this to a determination of what they consist of or should consist of. How does action competence, action ability and action willingness relate to the whole question of cultural relativity?

The Relationship between Action and Action Competence

The concept of action competence includes the capacity to be able to act, now and in the future, and to be responsible for one's actions. In other words, action competence is not identical to acting, nor can action competence be described/explained by describing the actions performed. However, it is reasonable to believe that performing actions (in a school context) helps to develop action competence. This linkage, however, is hardly simple.

Some of the arguments for action-oriented teaching have been based on a criticism that schools are often occupied with 'as if' problems in an 'as if' reality and that this teaching does not develop the awareness and action competence that is necessary to change the problems being worked with. In relation to this discussion, it is crucial to discuss and specify ways in which this demand for authenticity in teaching should be perceived.

There is often a tendency for the specific actions started in teaching in schools to be almost exclusively actions on the individual level (such as electricity and water saving via lifestyle changes). In this connection, it could be feared that

such actions do not lead to increased action competence, as the insight and understanding which are developed in a more explicit, hidden form through these actions can discourage the development of a more social and structurally oriented insight.

While we are of the opinion that the task is not to solve the problems of the world by 'using' the pupils, we believe that it is important to consider the educational significance of the objective content of the actions. It may be necessary to differentiate between actions concerned with participation in decision making exercises and 'as if' situations in teaching and actions whose intentions can be presumed to have objective significance for the circumstances to which the actions are addressed. Can this distinction be clarified and how do these types of actions relate to the development of action competence?

Action, Habit, Practice, Experience

Habits and actions are two different categories of human activity. While actions presuppose consideration of issues and making up one's mind, this is not the case for habits or other similar behaviour. Building up action competence is thus not the same as behavioural modification; often it is the opposite. But how should teaching that has the goal of developing pupils' action competence relate to the fact that modern behavioural and habit patterns are of crucial significance for many of the societal problems which make up the educational challenges of today?

Everyday life largely consists of habits which are more or less automatic sets of learned behaviours, and that is how it has to be as we cannot imagine a daily life where every single piece of behaviour has the character of an action. Habits, which could be said to make up our lifestyle, are formed, more or less, unconsciously. However, it is interesting that we can relate to our habits and decide to intervene in them, change them or form new ones. This must often be done indirectly by adjusting conditions of life and must often be done jointly with other people, but in any case it is important to note that it is possible to intervene by acting in that part of behaviour which does not have the character of action. In many of life's spheres this type of action, which really consists of behavioural changes, can have very great significance. This circumstance must be relevant for considerations in educational theory about both the goal and content of teaching as well as its form.

Actions and experiences are closely linked. Experiences are formed in continuation of actions and actions are performed among other things on the basis of previous experiences. Action competence will thus probably be closely linked to a person's structured world of experience. How do we come closer to an understanding of the types of experience that develop (relevant) action competence, and the types, if any, that counteract it?

Actions can be described and understood in an action language and in a practice language. In our critical democratic educational theory we should not reduce action to behaviour or practice to technique. It is a question of two different theory frameworks, which to some degree represent an Anglo-Saxon and a continental tradition. It is important to attempt a comparative analysis.

Individual, Common and Collective Actions/Experiences

Actions are always performed individually in the sense that single individuals perform the actions. In the same way, experiences are always gained individually. We cannot gain each others' experiences; in this sense, they are always personal and subjective. However, there can be common elements or common features in the actions/experiences of different people (a group).

To the extent that we live in the same culture and/or share conditions of life, we must expect to have many common experiences, on different levels of abstraction. However, there is often no common awareness of this and, in this case, the common experiences are not collective. Collective experiences presuppose a common awareness and conceptualisation of the common experiences. One of the ways this can be built up is in a teaching situation. Perhaps it could be said that common experiences are a prerequisite for democracy, while collective actions are functioning democracy?

Even though experiences can be individual, common and collective, it is arguable if it is possible to retain 'common actions' as a category between individual and collective actions, if allowances are made for the criteria for actions. Perhaps common experience is the key notion in connection with the qualitative transition from individual to collective action and in that way to development of action competence.

Notes on Contributors

BJARNE BRUUN JENSEN is Associate Professor at the Department of Biology, Geography and Home Economics at the Royal Danish School of Educational Studies.

KARSTEN SCHNACK is Professor at the Department of Educational Studies and Research at the Royal Danish School of Educational Studies.

Correspondence: Both authors are members of the Research Centre for Environmental and Health Education, The Royal Danish School of Educational Studies, Emdrupvej 101, DK-2400 Copenhagen NV Denmark. Fax +45 39667010. BBJ *Email*: brunn@dlhl.dlh.dk; KS Email: schnack@dlhl.dlh.dk

REFERENCES

BREITING, S. & JANNICHE, P.M. (1995) *MUVIN-DK. Background information for schools in Denmark participating in 'Nordic Environmental Education in 1994–96'* (Copenhagen, The Ministry of Education & The Royal Danish School of Educational Studies.)

BREITING, S. & NIELSEN, K. (Eds) (1996) *Environmental Education Research in the Nordic Countries* (Copenhagen, Research Centre of Environmental and Health Education, The Royal Danish School of Educational Studies).

CHRISTENSEN, C.U. & SCHNACK, K. (1991) *Miljø og Natur. Rapport om Udviklingsarbejderne inden for Området Naturorientering og Miljøundervisning (Environment and Nature. Evaluation Report about Experimental Teaching and Innovation Projects in the Danish Folkeskole)* (Copenhagen, The Royal Danish School of Educational Studies).

DEWEY, J. (1938) *Experience and Education* (New York, NY, Collier Books).

HELLESNES, J. (1976) *Socialisering og Teknokrati (Socialization and Technocracy)* (Copenhagen, Gyldendal).

HILLCOAT, J., FORGE, K., FIEN, J. & BAKER, E. (1995) 'I think it's really great that someone is listening to us ... ': young people and the environment, *Environmental Education Research*, 1, pp. 159–171.

JACOBSEN, B., SCHNACK, K. & WAHLGREN, B. (1980) *Erfaring og Undervisning* (*Experience and Education*) (Copenhagen, Gyldendal).

JENSEN, B.B. (1991) Farming and Health in Environmental Education, in: S. BREITING & C. HELWEG OVESEN (Eds) *Agriculture and the Cultural Landscape in Environmental Education*, pp. 32–40 (IUCN, The World Conservation Unit).

JENSEN, B.B. (1994) Health promoting schools in Denmark: an action competence approach to health education, in: C. CHU & R. SIMPSON (Eds) *The Ecological Public Health: from vision to practice*, pp. 132–41 (Griffith University, Centre for Health Promotion, University of Toronto and Institute of Applied Environmental Research).

JENSEN, B. (Ed.) (1995) *Research in Environmental and Health Education* (Copenhagen, Research Centre of Environmental and Health Education, The Royal Danish School of Educational Studies).

JENSEN, B.B. & NIELSEN, K. (1996) Activities, actions and action competence, in: S. BREITING & K. NIELSEN (Eds) pp. 120–143, op. cit.

JENSEN, B.B. & SCHNACK, K. (Eds) (1993) *Handlekompetence som Didaktisk Begreb* (*Action Competence as Curriculum Concept*), Studies in Educational Theory and Curriculum, Vol. 2 (Copenhagen, The Royal Danish School of Educational Studies).

JENSEN, B.B. & SCHNACK, K. (Eds) (1994) *Action and Action Competence as Key Concepts in Critical Pedagogy*, Studies in Educational Theory and Curriculum, Vol. 12 (Copenhagen, The Royal Danish School of Educational Studies).

KARLEGÄRD, C. & TOFTENOW, H. (Eds) (1990) *Miljöhistoria* (*Environmental History*) (Studentlitteratur, Lund).

MOGENSEN, F. (1995) Handlekompetence som Didaktisk Begreb i Miljøundervisningen (Action competence as a curriculum concept in environmental education), Ph.D. thesis, Research Centre of Environmental and Health Education, The Royal Danish School of Educational Studies, Copenhagen.

NIELSEN, B. (1973) *Praksis og Kritik* (*Praxis and Critique*) (Copenhagen, Christian Ejlers' Forlag).

NIELSEN, T.I. (1978) *Handlinger* (*Actions*) (Copenhagen, Dansk psykologisk Forlag).

SCHNACK, K. (1977) *Humanisme—livsanskuelse og menneskesyn* (*Humanism—philosophy of life and anthropology*), in: F. NIELSEN (Ed.) *Pædagogisk Teori og Praksis* (*Theory and Praxis in Pedagogy*) (Copenhagen, Borgens Forlag).

SCHNACK, K. (1981) Erfaringspædagogikkens Baggrund og Forudsætninger (The Idea and Background of Experiential Education), Pædagogisk Orientering, 1–2, pp. 2–7.

SCHNACK, K. (1994) Motiver og behov (motives and needs), in: K. SCHNACK (Ed.) *Psykologisk Opslagsbog* (*Critical Essays in Psychology*) (Copenhagen, Christian Ejlers' Forlag).

SCHNACK, K. (1997) Why focus on conflicting interests in environmental education? paper presented at the *Northern Call for the Environment. International Conference on Environmental Education*, Savonlinna, Finland, June 1996. To be published in M. AHLBERG *et al.* (Eds) *Education for Sustainability, Good Environment and Good Life*, in press.