

Action Competence as an Integrating Objective for Environmental Education

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Abstract

This paper outlines briefly some of the factors and forces that have led to the multiplicity of approaches to and the dis-integration of the objectives of environmental education. It traces the evolution of the understanding of the concept of action competence, and of its application in environmental education research and practice in Portugal. The comprehensiveness of action competence allows and requires that environmental education integrate separate and sometimes opposed approaches: knowledge, in the form of know-that, about the environment and about society; knowledge, in the form of know-how, of how to act, individually and collectively, to bring about change; and the will to act, will-to, based on affections and values that impel and sustain action.

Résumé

Cet article est une brève description d'un certain nombre de facteurs et de forces qui ont contribué à la multiplicité d'approches et à l'effritement des objectifs de l'éducation environnementale. Il trace un portrait de l'évolution de la compréhension du concept de l'action compétente et de son application en recherche et en pratique par rapport à l'éducation environnementale au Portugal. Le caractère global de l'action compétente permet, voire exige que l'éducation environnementale intègre des approches séparées et parfois opposées : les connaissances, sous forme de « savoir dire », au sujet de l'environnement et de la société; les connaissances, sous forme de « savoir faire », sur la façon d'agir, tant individuellement que collectivement, afin de provoquer les changements voulus; et la volonté d'agir fondée sur ce qui tient à cœur et les valeurs qui incitent et soutiennent la prise d'action.

Environmental education seems to be anguishing about its identity (Jarnet, Jarnet, Jickling, Sauvé, Wals, & Clarkin, 2000) and about the criteria for judging its quality (Jensen, Schnack, & Simovska, 2000). From a relatively long and non-controversial ancestry as nature study or as experiences and immersion in nature (Orellana & Fauteux, 2000; Silva, 1997), environmental education was “born” in 1972, if we are to accept the most common dating, from the International Conference on the Human Environment (United Nations) held in Stockholm. It was apparently destined for controversy about its legitimacy—its place, and the stability of that place, in the education family.

The environmental education that emerged from Stockholm and whose family features were more clearly delineated in Belgrade (International Conference on Environmental Education, UNESCO, 1975) and Tbilisi (Intergovernmental Conference on Environmental Education, UNESCO, 1977) was an education oriented towards the conservation or preservation of nature and, specifically, toward the solution of existing, and the avoidance of future, problems of the pollution or damaging of nature (Máximo-Esteves, 1998; Orellana & Fauteux, 2000; Silva, 1997). The first of these features (conservation or preservation of nature) is a recognizable family trait of the nature study and experiences in nature family tree; it is presumably based on the desire to preserve and to conserve a nature which is, in comparison with urbanized and industrialized zones, wild, pure, green and untouched. It is restorative of whatever part it is of the human person that depends for health and pleasure upon contact with nature in that form, a desire that is presumably based upon a history of gratifying contact. The more novel element was its second feature, its revealing of the problem aspect (the pollution or damaging of nature), its calling into consciousness the fact of threats to that very aspect of nature which makes one want to conserve and preserve it. Environmental education was not presented at Stockholm, Belgrade and Tbilisi just to celebrate nature—from its birth it had the unpleasant task of calling to attention unpleasant realities and, presumably, of asking, “Why?”

A preference for one or another of these features in environmental education may spring from the common pleasure of parents in seeing their features reflected in their offspring. There is a school of environmental education that still struggles for the providing of experiences of wilderness, of prolonged and intimate contact with unspoiled places and with the wisdom of communities nurtured in, and nurturing of, these unspoiled places. There is another school of environmental education, however, perhaps more anguished about the damage already done than exalted about the wonder that still remains, that focuses upon the necessity of repairing and preventing further damage as an essential aspect of conservation and preservation. Both of these schools of environmental education can recognize themselves in the Stockholm-Belgrade-Tbilisi offspring.

As offspring tend to do, the environmental education child indeed asked, “Why?”, and the answers proposed for consideration were challenging ones, especially challenging to values associated with that very urbanized and industrialized life whose contrast with nature was basic to the ideas of conservation and preservation, i.e., the values and pleasures related to consumption and to ease and very well exemplified in the yacht bumper sticker seen in Chesapeake Bay, “He who dies with the most toys, wins.” The decade of the 70s drew to a close and that of the 80s began, however, without open recognition in environmental education circles of the profundity of this clash of values. Was it really reasonable to suppose that the powerful interests involved in the marketing of consumption and of ease would

not try to impede, would in fact facilitate and promote, a powerful international environmental education program that would call into question those values?

Somewhere among the many, great changes which occurred between the 60s (Rachel Carson's, *Silent Spring*, 1962) and the 80s are the factors that produced, on the one hand, such environment-related documents as the Club of Rome's *The limits to growth* in 1972, with its strong criticism of the reigning model of development, and the Brundtland Commission Report *Our Common Future* in 1987, with its proposal of a "new" model of development, sustainable development, and that produced, on the other hand, reactions to and interactions between them. The Congress of Moscow, sponsored by UNESCO in the same year as the Brundtland Commission, is the last of the international conferences to refer to environmental education with the same insistence on its "vital importance" (Máximo-Esteves, 1998, p. 77). By 1992, at the UN Conference on Environment and Development, held in Rio de Janeiro, environmental education has been nearly replaced by a new recommendation, that of education for sustainable development. The significance of this shift has been widely debated, starting at the parallel meeting of NGOs in the Global Forum in Rio and their insistence on maintaining the adjective "environmental" in their adoption of the title *Environmental education for sustainable societies and for global responsibility* for one of their documents.

The result of all these developments has been that, before and since 1992, an enormously wide variety of activities, with apparently diverse objectives, has come to be called environmental education, and no very clear way of deciding whether activities qualify as such, and to what extent their objectives are compatible or mutually reinforcing, has been proposed or adopted. Prolonged research based on the concept of action competence has led to the conviction, proposed here, that this concept is sufficiently rich and comprehensive as to provide a framework for judging the worth of various forms of environmental education and of integrating worthy objectives. The argument will be presented in the form of alternating sections: those of progressive reflections on the concept and those of descriptions of the research and practice contexts on which those reflections are founded.

Environmental Education From the Perspective of Action Competence

Context and Reflections: The 1993 Planning Meetings

The first presentation of the notion of environmental action competence, in the present research program, was made at an initial meeting in March of 1993 of the European teams that constituted the project *Children as catalysts of global environmental change* (Jensen, 1993; see Uzzell et al., 1994). The chief preoccupation in this and the next planning meeting was to clarify the difference between activity-oriented environmental education (a water-testing kit in a local river, in England; a museum science exhibit on the environment,

in France) and action-oriented environmental education (community-based environmental interventions, in Denmark). There were only three bibliographic references in Jensen's (1993) photocopied text, two of which were his own, and none of the reference titles includes the words *action* or *action competence*; the territory was still virgin.¹ As would be expected, therefore, the definitions offered were exploratory, and there were as many questions as answers.

What was meant by competence?

In this early paper, Jensen (1993) used the word *ability* in the only definition he gives of *competence*: "teaching should train the pupils' ability to act; it should build up [their] 'Action Competence'" (p. 2). As will be seen later, the tendency in psychology in recent years has been to distinguish competence from ability, but it was with this definition that the work started.

What was meant by action?

Jensen (1993) defined action by way of negation: it is not mere behaviour; constructing action competence does not consist in changing behaviours (p. 2). Action is also not the same as practical activity, just *doing something* (p. 5). Thus, by negation, he arrived at two components of action, one observable, the other not: not observable is the "makes up one's mind oneself and decides to do something" (p. 5); observable is "to be goal-oriented" (p. 6), to "be directed towards the solution of the problem that is worked with (*sic*)" (p. 5).

What was meant by action competence?

In the conclusion of his text, Jensen (1993) left open the questions, "What are the components of action competence? How can we operationalize the components of action competence?" (p. 8), offering the opinion that this competence will include the two components of knowledge and of commitment (p. 7). Danish colleagues did not hesitate in responding to this challenge. In the second meeting of the teams of the project *Children as catalysts of global environmental change* (July of 1993), the only psychologist on the Danish team presented a discussion paper that analyzed action competence (Uhrenholdt, 1993); for him, action competence was "being capable of seeking information, analysing, evaluating, arguing and together with others deciding and acting" (p. 2). At the next meeting (October of 1993), Vognsen presented a diagrammatic analysis of action competence (1993) that later was elaborated into the version that Gayford (2001) used (Vognsen, 1996) in his treatment of action competence. In the diagram, competence appears as the result of three lines of force and as the impulse for a fourth; it has as components or dimensions factual knowledge (scientific, systematic, fragmentary), interpretative knowledge (intuitive, spontaneous, holistic), and commitment

to change (values, meaning, opinions), all of which make possible the conceptual production of action alternatives and of criteria for the assumption of responsibility and the selection of action (pp. 1-2). At the same meeting, Mogensen (1993) defined action competence as:

a personal capacity which implies will and ability to expose the possibilities of acting on societal problems with the intention to solve them, and where action-consciousness and action-emotive is a result of discipline-oriented reflections and responsible choices of acquired knowledge and skills using fundamental values, patterns of interpretation and personality factors as a yardstick. (p. 5)

What was meant by environmental action competence?

A simple specification served to apply the definitions of action and of competence to the definition of environmental action competence: the specification of the nature of the "societal problem" to be acted on as an environmental one. Safeguarded, of course, was the notion that the intention must be to solve the problem, i.e., to change somehow the causes and not merely to clear away its symptoms or effects.

Context: The 1993-94 Case Studies and the 1996-98 Teacher Training Experiments

Following these planning meetings, each national team set out to implement and evaluate environmental education programs whose impact on the acquiring of action competence would be studied. Details are to be found in the national case studies chapters of Uzzell and his collaborators (1996, 1998). A common finding among the national studies was that, in general, teachers and schools were not prepared to carry out this action-oriented form of environmental education. For this reason, a second research project was organized, with the aim of training a group of Portuguese teachers (1996-97) who would in turn train and accompany other teachers (1997-98) in the use of the action competence model. In July of 1998, a seminar was held with both groups—trainers and trainees—to reflect on their experiences and to reinforce concepts which their experiences indicated were still not sufficiently clear to them.

Reflections

The only communication from the July, 1998 seminar that assumed a written form, albeit poorly organized, brought together a series of citations related to the concepts of action, of situated knowing, of action and narrative knowing, and of real-life tasks and authentic contexts in the promotion

of transfer (Fontes, 1998). A more recent definition of action, also emanating from the group at the Royal Danish School of Educational Studies (RDSES), enriched that of Jensen (1993) by its insistence on making observable what was previously left unobservable: "The concept of action competence has been defined as the pupil's ability to make deliberate choices directed at specific goals *and also their ability to give reasons for their choices*" (Hansen, 1995, p.114, my emphasis).

This insistence on a discursive or narrative aspect of competence permits or even requires the inclusion of an element of Habermasian communicative competence in the definition of action competence. From a narrative perspective, however, the actor not only "gives reasons" through communication; (s)he also creates reasons through communication:

...humans make decisions about what they want and about what they need to do to satisfy those wants. We retrieve stories about our own and the community's past, and these provide models of how actions and consequences are linked. Using these retrieved models, we plan our strategies and actions and interpret the intentions of other actors. Narrative is the discourse structure in which human action receives its form. (Polkinghorne, 1988, p. 135)

When one thinks of how seldom in a school a child is asked to make choices and to give reasons for the choices made, one can only wonder at the communicative competence that many children demonstrated in the course of action-oriented interactions with community adults—and not wonder at their delight in them. It was exactly such competence and such delight to which the teachers testified in the course of this seminar.

Much insistence was placed, in the seminar paper, on the distinction between competence and capacity, the latter signifying something passive and "potential" while the former is "on the verge of realization, more readily demonstrated in practice" (Fontes, 1998, p. 1). Further, insistence was placed on how this demonstration can be promoted. The question of how the various components of knowledge can be combined and applied in new situations is well studied in the psychology of learning; a review, current at the time, of the principles for encouraging transfer (Sonntag, 1997) proposes elements that the action competence approach perfectly incorporates²:

- authenticity (the creation of realistic and complex situations, so that the learner acquires simultaneously the knowledge and the conditions in which that knowledge is applied)
- concrete situation (application situations may have to be simulated...if one cannot create real life tasks)
- multiple contexts and perspectives (acquired knowledge has to be applied in different situations and problem areas, with varying perspectives taken into account)
- social context (cooperation between students and integration into the community of experts). (p. 344-349)

The coherence between the action competence approach and the most current psychological findings about learning was becoming more clear and convincing—to the teachers and to the research team.

Context: 1998 to the Present

From the autumn of 1998, the training and accompaniment of teachers in the practice of action-oriented environmental education became a regular feature of in-service education provided by the specially-trained trainers. Yearly seminars brought together the Danish specialists, the Portuguese research team and trainers, and all previously-trained teachers who wished to attend. These seminars provided an impetus to the on-going deepening of understanding of the richness of the action competence approach and of its intellectual compatibility with other theorizing in education.

Reflections on Competence and on Action

In Europe, one of the authors most closely associated with the explication of the notion of competence³ is the Swiss sociologist Philippe Perrenoud. In an interview, Perrenoud defines competence as “the faculty of mobilizing a set of cognitive resources (things known, capacities, facts, etc.) in order to resolve with pertinence and efficacy a series of situations” (Gentile & Bencini, 2000, p. 1). Competence does not merely consist of the possession of resources (among them, possibly, ability) but in their mobilization in situations where they are pertinent and efficacious. This definition of Perrenoud makes clearer than the original usage of Jensen the complexity of competence; it is truer, in a sense, to the idea of competence as employed in the 1993-94 study. Yet even Perrenoud’s definition is not adequate to what was really in play. Competence is not merely the “set of cognitive resources” but their mobilization, and that mobilization depends on an *in order to*, that is, on a desire “to resolve with pertinence and efficacy” a situation (Gentile & Bencini, 2000, p. 1). Competence involves not merely *knowing that* or *knowing how* but *wanting to*, an element that the Danish colleagues have been clearer about including, in the form of commitment (Jensen, 1993), of commitment to change (Vognsen, 1996) and of an action emotive element (Mogensen, 1993).

Reference to a single sociological work (Giddens & Turner, 1987) suffices to demonstrate the complexity and the different perspectives and theoretical positions that exist in relation to the notion of action. In the index of terms, the entry for “action” refers one to the chapters on behaviourism (Homans, 1987), symbolic interactionism (Joas, 1987), Parsonian theory (Münch, 1987), structuralism (Giddens, 1987), ethnomethodology (Heritage, 1987), structuration theory (Cohen, 1987), and even mathematical method (Wilson,

1987). Surprising, given the identification of the Danish group with critical pedagogy (Jensen, Schnack, & Simovska, 2000), is the absence of any reference in the index of terms to the chapter on critical theory (Honneth, 1987). What most of the treatments of action have in common is an effort to describe a means by which a human being can achieve ends that are not wholly determined by the social structures in which (s)he operates; the descriptions range from behaviourism's (Homans, 1987) "long chain of means to an end," "long chain of actions leading up to some ultimate reward," and "actions taken in the present feed back to affect future action...The feedbacks...give...the impression that animals and humans have purposes. Indeed they do" (p. 60) to structuration theory's (Cohen, 1987) "A distinguishing feature of the exercise of social agency... is that the interventions undertaken by social agents are, to some greater or lesser extent, always under their own control" (p. 284). Somewhere between these two, Parsonian theory seems to underlie Jensen's position, that "we must begin with the first definitional characteristic distinguishing human action from mere reaction to causal impulses or instinctive response to stimuli, i.e., with meaningfulness...human action is guided by symbols whose meaning is interpreted by actors" (Münch, 1987, p. 119). Even Parsons, however, recognizes that human action is not independent of the complex system of antecedents and of consequences in which it takes place.

Giddens articulates this limitation in a way extremely suggestive for action competence approaches:

"acting otherwise"...represents only a denial of a thorough-going determinism of agency by forces to which the agent must respond automatically. But if structuration theory denies a thorough-going determinism, it stands equally opposed to unqualified freedom...*the latitude of freedom of agency crucially depends upon the range of practices that an agent is competent to perform.* (Cohen, 1987, p. 285, my emphasis)

The conclusion is clear: to increase the action competence⁴ of a person is to increase the space of human freedom.

And does school do this? Not if one believes the analysis of Perrenoud (Gentile & Bencini, 2000):

the school is more concerned with the ingredients of certain competencies, and much less with putting them in synergy in complex situations...the school doesn't concern itself with connecting these resources [disciplinary knowledge] with determined life situations...the transfer and mobilization of capacities and knowledge does not fall from heaven. It is necessary to work them and to train them. This demands time, didactic stages and appropriate situations. (p. 2)

How Action Competence Can Serve as a Unifying Objective and Criterion

In some parts of the world, certainly in the United States and in Canada, environmental education has become subject to, or the target of demands for, the setting of standards, often in the form of the precise specification of what content will be taught, what outcomes will be produced and what the relation is between the processes employed and the outcomes to be attained (Wals & Jickling, 2000). In Portugal, this problem has not (yet) arisen, either at the level of the curriculum in general or at that of environmental education. On the contrary, some five years after the establishment of a commission to develop a national strategy for environmental education, no such strategy had been agreed nor did there appear any sign of a public process of hearings to support the elaboration of such a strategy document (Fontes, 2003, p. 10).

Context: Multiplicity and Dis-integration

Between 1996 and 2002, the Institute for the Promotion of the Environment (IPAmb – *Instituto da Promoção Ambiental*), in collaboration with the Ministry of Education, financed a large number of environmental education projects in schools, but the criteria for the selection of the projects to be funded were far from clear, and no serious effort was made to evaluate either the process quality or the outcomes of these projects. What was denominated evaluation was no more than, firstly, the description by the participants—through posters, videos or other audio-visuals—of what was intended and what was done and, secondly, testimonials, usually ephemeral, by the same participants about the interest and enthusiasm, the consciousness-raising and the change of attitudes on the part of the pupils.

In addition to this costly program, *Ecotecas* have been established; many districts and municipalities have opened environmental education Centres and most municipalities offer activities of a seasonal or observational nature (elaboration of Christmas trees or Christmas crèches from waste materials; Earth Day or Tree Day; beach cleanings), and environmental education has also become a business venture as organizations offer kits, books, or programs. No attempt has been made to justify or to rationalize this enormous range of supply or to ascertain what contribution it makes to some agreed-upon goal(s). One may say, “Little wonder,” as no such agreed-upon goals have been defined as part of a national strategy; neither, however, are the goals established at Stockholm and Belgrade, and which are cited in the Environment Institute’s own web site (Instituto do Ambiente, 2003), employed as a base for planning or for evaluation.

Context: A Unifying Vision

At the same time, there exists in the *Lei de Bases do Sistema Educativo* (Fundamental Law of the educational System) an affirmation of an expected outcome of this system which would lend itself easily to the adoption of action competence as the standard for education and of environmental action competence as the standard for environmental education. First, there is a definition of the “right to education” as “the guarantee of a permanent formative action oriented so as to favour the global development of the personality, social progress and the democratisation of the society” (Art. 1, 1). There then follows the affirmation that, “responding to the necessities resulting from social reality,” the educational system “contribut[es] to the full and harmonious development of the personality of the individuals, striv[es] for the formation of free, responsible, and autonomous citizens characterized by solidarity and valu[es] the human dimension of work” (Art. 2, 4):

Education promotes the development of the democratic and pluralistic spirit, that is respectful of others and of their ideas, and that is open to dialog and the free exchange of opinions, forming citizens capable of judging with a critical and creative spirit the social environment in which they are integrated and of devoting themselves to its progressive transformation. (Art. 2, 5)

Reflections

The correspondence of these affirmations with Perrenoud’s (Gentile & Bencini, 2000) definition of competence and Gidden’s (Cohen, 1987) facilitators of human agency are noteworthy and justify action competence as an integrating objective, not only for environmental education, but for education as a whole. Portugal is not the only country to aspire to educational aims like those outlined above, and action competence as an integrating objective has the advantage of not requiring an education *for* any specific goal, such as sustainable development, sustainability or viable futures, or indeed, for responsible societies (Sauvé, 2000). Such specific goals can always be questioned, “What counts as development? What should be sustained? What is responsible?”

The goal of educating action competent human beings, ever more competent human agents, seems difficult to argue. Such competence is a competence to act—to “act otherwise,” to make a difference—in social situations, and among these social situations are all of those pressing preoccupations in contemporary education: peace, human rights, economic development and the environment. What unites them all is the need for action competent humans to deal with them. What distinguishes them is the focus of the social situation in question. Adopting such an integrative approach will allow us to try to find the elements of action competence that are common to all or many of these areas (and that can wonderfully be promoted in a wide variety of

action situations) and to find those that are more specific to one or another (and that require specific provision for their promotion). Environmental educators will have no difficulty in finding shared elements of action competence and in finding their unique ones. There should be less competition for scarce educational time.

Standards for environmental education, instead of constituting a list of valued outcomes and/or processes in contention and with little base for resolving the contention, can be justified in terms of the contribution that they make to action competence. The list that Wals & Jickling (2000, p. 143) offers a useful exercise:

The total immersion anchor point (fostering a direct experience with a real world environmental phenomenon) contributes to the "wanting to act" element of competence, the action-emotive element that mobilizes other elements of competence into action. The diversity in learning styles anchor point (being sensitive to the variety of learning styles and preferences) will be shown essential as each learner comes into each learning situation in possession of a unique "bundle" of competence elements which must be taken into account in increasing his or her action competence. The experience of running across a snake on a nature walk may have very different effects and will need to be handled differently for different children. The active participation anchor point (developing discourse and ownership by utilising learners' knowledge and ideas), the case study approach (digging for meaning by studying an issue in-depth and looking for transferability to other areas), the social dimension of learning (mirroring the learner's ideas, experiences and feelings with those of others through social interaction) and the reflective action anchor point (making the development of reflective action and action competence an integral part of the learning process) are quite obviously all included in the action competence approach as it has been developed and applied in the Danish and Portuguese contexts. (p. 143)

Even the balancing the far and near anchor point (developing empowerment) is included in action competence. Developing action competence is empowering; experiences of empowerment increase one's competence for future actions through their mobilizing energy.

The main work to be done is in coming to terms with the basic notions. Competence consists of the mobilization of a great variety of resources or elements of competence: cognitions, simple and complex, affects, will and values. This mobilization needs to be practiced in complex, authentic social situations—perhaps this is the notion most commonly held of action-competence-oriented environmental education. However, the acquisition of the constitutive elements and resources are also essential to action competence and should not be considered divorced from it. Fostering a love of nature and a respect and affinity with human communities that have maintained close and respectful relations with nature can build up an affective element of action competence. Learning about the marvellous web of interdependencies between life forms in a given ecosystem can build up both cognitive

and affective (if done lovingly and reverently) elements of action competence. Being trained to “do what you are told” or to “let the experts handle it” almost certainly does not build up action competence (unless one can count upon the at least occasional reaction of the human spirit to resist such conditioning by deciding [“acting otherwise”] to do the opposite).

I repeat: *this mobilization, this competence as a human agent, needs to be practiced in complex, authentic social situations.* In addition to the rich contribution that a wide variety of environmental education approaches can make to human action competence, there must be the provision—in schools, if possible, but also in civil society and in political entities—of occasions for the integrating of the constitutive resources, for participation in community-based action-oriented environmental education if one is to count on the autonomous practice of environmental action competence in daily life, in common social practice.

Notes

- ¹ Virgin, that is, to the British, French and Portuguese teams who knew nothing of the extensive underpinning, in theory and in practice, that the concept of action competence had behind it in the work of Søren Breiting, Christian U. Christensen, Leif Lørring, Kirsten Nielsen, and Karsten Schnack, an underpinning itself founded in German and Nordic pedagogical traditions many of which are, unfortunately, not available to much of the larger audience of environmental education researchers. References to related texts may be found at www.actioncompetence.com.
- ² See Uzzell et al. (1996) on authenticity (p. 57-62) and on interactive social contexts (p. 45-57, 61-67).
- ³ This idea of competence has nothing to do with the notion of “minimal competencies” (singular = competency, not competence). Competence is a complex of many different resources integrated in dealing with a complex situation.
- ⁴ To accept that a person be minimally competent is like accepting that (s)he be minimally human.

Acknowledgements

This article is the result of successive distillations: first, from a chapter prepared for a university text on environmental psychology and environmental education to be published in Portuguese by the Calouste Gulbenkian Foundation; second, from a paper presented to the First World Environmental Education Congress in Espinho, Portugal, May 2003. Both of these versions can be found at www.iec.uminho.pt.

Note on Contributor

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