The Stories (Woman) Teachers Tell: Seven Years of Community-Action-Oriented Environmental Education in the North of Portugal

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Abstract

Since a group of 13 woman teachers (and one man) qualified as teacher trainers for a model of community-action-based environmental education, stories have emerged about the variety and impact of community interventions. Several stories involved local and women's knowledge. And other stories told of the transformative effect that the model had on their own professional development and practice. Devaluing of women's and other local knowledge and practice has been uncovered, and attempts to re-value have been among the Actions children chose to collaborate in implementing.

Résumé

Depuis qu'un groupe de treize enseignantes (et un enseignant) s'est qualifié pour former les enseignants dans le cadre d'un modèle d'éducation environnementale centrée sur l'action communautaire, des voix se font entendre sur la diversité et la portée des interventions en milieu communautaire. Plusieurs de ces récits participent d'un savoir véhiculé par le milieu local ou par celui des femmes. D'autres récits témoignent de l'effet transformateur qu'ont eu les modèles sur le développement professionnel et l'exercice de la profession. On a levé le voile sur la dévalorisation des connaissances et des méthodes véhiculées par les femmes et le milieu local. Les tentatives de revalorisation font partie des mesures à mettre en œuvre auxquelles les enfants choisissent de collaborer.

Minho, in the very north of Portugal, bordering Spain along the river of the same name, is one of the most traditional and most politically conservative regions of Portugal. It is also traditionally Catholic, maintaining practices of religious processions and celebrations that enliven and characterize tiny villages, small towns and every-sized cities alike. And the combination of these factors has given a specifically local, a specifically northern, colour to many of the community action projects in which children, teachers, and schools have participated along the seven years since the European Commission project began with its theoretical, hypothesis-testing phase (1992-94) (Uzzell et al., 1994), moved on to an experimental teacher train-

ing and field implementation phase (1995-97) (Fontes, 1997), and continues in its established teacher training and support for practice phase (since 1997), assisted greatly by the publication in Portuguese of the 1994 report (Uzzell et al., 1998).

Another effect of the extreme northerliness of Minho is its distance from the centres of power in Lisbon. A disgracefully high proportion of the structural funds and the research funds that Portugal receives because of its relatively disadvantaged position in the ranking of European Union countries is distributed in the Lisbon area. National Ministries find it easier to innovate, to try out new practices, and to hear the complaints, of people and institutions in and near Lisbon. I can think of a specific case which particularly shocked me and has some relevance in feminist terms. A few years ago a pilot breast cancer identification project was initiated—in the Lisbon area only.

This centralist tendency contributes to a sense of powerlessness in the north. I remember the delight of several northern museums in being invited to join a school-museum project of mine: "we never have occasion to meet among ourselves; our only communication is with Lisbon." As my story would have it, this isolation and holding at arm's length ("Can anything good come out of Nazareth?") phenomenon has had its effect on the diffusion (or difficulty of diffusion) of the model of environmental education which we in Minho have been testing and promoting. The fact of its being led by women, mainly primary school teachers, may well be another factor, subject for feminist critique.

History of the Investigation-Vision-Action-Change (IVAC) Approach

Summary of the Project(s)

In March of 1993, when the international team (British, Danish, French, Portuguese) of the Socio-Economic Environmental Research (SEER) project of Directorate General XII (DG XII), "Children as Catalysts of Global Environmental Change," met for the first time, in Guildford, England, two pilot documents were presented. They came to define two orienting themes for the following 18 months of work and, indeed, for the entire future development of an approach or model for environmental education. The first of these (Uzzell & Rutland, 1993) dealt with social psychological issues of inter-generational communication and influence underlying the title notion of children as potential change agents (catalysts) in relation to their families and to other adults. The other (Jensen, 1993) dealt with the pedagogical notions, founded in philosophy, psychology and sociology, of action—of specifically human action, involving reasons and choices—and of environmental action competence—specifically, the competence for taking reasoned and consciously chosen actions in respect of the environment.

After 18 months, which included 6 International Workshops, as well as

environmental education pilot projects in each of the participating countries, investigating the effects of the presence (or absence) of various aspects of the approach (children as catalysts, action-orientation) within each pilot project, we reached several conclusions:

- the environmental education projects carried out with children only, whether in schools (England, Portugal) or in museums (France), had very little or no impact on parents or other adults; impact on parents or others could be shown only in cases where they were in direct contact with the environmental education projects (in at least some cases in all four countries);
- only the projects in which children were directly involved in the identification and the treatment of an environmental issue or problem (Denmark, one case in France, a few cases in Portugal) brought about observable effects on the school or community environment;
- the greater the degree of school-community or school-family involvement in environmental actions, the greater was the ability of the participants to explain and justify their claimed growth in action competence; and
- this approach to environmental education requires changes in the way in which schools and local communities typically act, and interact, regarding teaching, learning and treatment of the environment; education (training, practice and support) and incentives will be necessary to effect these changes (Uzzell et al., 1994).

A second phase of this environmental education project was carried out, between November of 1995 and June of 1997. The intention was to develop and study forms for providing teachers with the training, practice and support (Fontes, 1995). Reflection on, and further practice of the approach, particularly by the Danish and Portuguese teams, led to the decision to organize both the training of teachers, and their implementation of the action and action competence form of environmental education, around a four-point cycle, or spiral, of concepts and practices. These four points—Investigation, Vision, Action and Change—give the approach or model its acronym, the IVAC model (in Portuguese, IVAM).

Specifying the IVAC Approach

Briefly, how does the approach work? An eight-question list which we had used in the first phase of the project, both as an orienting structure for the environmental education projects and as a guide for the operationalization of action competence, was re-organized around the four IVAC points—an effort to avoid an excessively linear interpretation and application of the list.

Thus, in a first phase of the environmental education work, teachers guide the children in an investigation of their local community in an effort to identify aspects of the local environment which merit attention and possible

change. In this process, investigative methods from both the natural and social sciences are used—observation, measurement, chemical or biological testing, in the first case, and observation, interviews, questionnaires, and document analysis (newspapers, etc.), in the second case. This process suggests answers to questions such as:

- Within what area of the environment is improvement needed? (where responses are as varied as traffic safety, trash dumps, unused water mills, and the falling into disuse of plants with culinary or medicinal value);
- On what concrete aspect of this problem area shall we focus our attention? (the first area typically indicated is very broad, like "water" or "air");
- How did this situation arise?;
- Why hasn't anything been done about this before? (here the children are asked to consider basic questions about individual and social motivations and about conflicts of interest); and
- Who gains from this situation? Who loses? Why do people do this or let so-and-so do this or stop doing this or neglect this?

In a second phase, children's creativity and imagination are called into play through the creation of visions:

- How could this aspect of our environment be different and better?; and
- How would we really like to see our school crossing or our river bank or our woods or local traditions treated?

Drawings and compositions, collages or maquetes may be useful here. Whatever forms are used, the idea is to build with, and among, the children the notion that their local environment is at least partially constructed and that they, along with others who reside there, have a right to help decide how its future construction should take place.

The action phase follows, with the basic questions being:

- What can we do to bring about this new reality that we envisioned?; and
- What action can we take to realize our vision?

This is a complex phase which often involves the return to previous steps: investigation of what obstacles and difficulties might arise for each action contemplated, visions of collaborations that might be arranged, investigation of the concrete possibilities for overcoming obstacles, and for arranging the help and support needed to do this. Consideration of the actions possible—direct and indirect, individual or collaborative ("Which is more likely to succeed?")—the selection of actions to be tried, the seeking of collaborators, the implementation of actions, the accompaniment of the actions and of the collaborations, all of these involve intense dialogue and negotiation, real-life

tasks that require speaking, listening, reading, writing, calculating, and graphing. They also involve physical labour and the use of various forms of social communication.

Finally, the stage of evaluation of change involves more investigation:

- Did we manage to change anything?;
- Is our environment any better?;
- Are we anywhere nearer the reality we envisioned?;
- If not, why not?, If so, what worked well?;
- Whether or not anything in the environment changed, did we change?;
- What have we learned?; and
- What will we do in the same way, or differently, next time?;

In short, "Are we and our collaborators more action competent than we were before?"

The Implementation of the IVAC Approach

The purpose of the second phase of our project, the one financed by Directorate General XI (DG XI) between November of 1995 and June of 1997, was the creation and experimentation of a training course for trainers. Themselves teachers, their basic task was to provide in-service education for other teachers on how to carry out environmental education, specifically using the IVAC approach. Fourteen teachers completed the course that began in May and ended in December of 1996; eleven of these were primary teachers, two were secondary teachers and one was a teacher of televised school. Of the eleven primary teachers, five had taken part in the first phase of the project (1993-94), four were recent graduates of a specialization course in the Institute of Child Studies, and two were already experienced trainers. One of the secondary teachers, and the teacher of teleschool, were also experienced trainers (Fontes, 1997).

Toward the end of their training period, all of these teachers expressed a need to have, before offering training to other teachers, an intensive practical experience of the IVAC model. Accordingly, we, as a group, made two proposals to FOCO (the association for in-service training of teachers) and one to the Institute for Environmental Promotion (IPAmb). The latter financed an environmental education project with the theme of "The Human Mark on Nature." It employed the IVAC approach and functioned from February through June of 1997, in a network of seven primary schools, with classes taught by seven of our trainers. Each of the other seven trainers served as partner/aide to one of the classroom teacher trainers. The first FOCO action was a Study Circle, running in parallel with the environmental education projects, in which the 14 trainers shared and discussed their experiences. A report of this experience was submitted to IPAmb (Afonso & Brandão, 1997) and is

awaiting publication by the Institute for Educational Innovation.

The second FOCO action was a training course for teachers (September through December, 1997) offered by the new, now more confident and experienced (at least in action-oriented environmental education) trainers. About 40 teachers completed this course, and 20 of these, in nine primary schools, were awarded an IPAmb grant for January through June of 1998, again accompanied by a FOCO Study Circle. In July of 1998, these teachers presented their experiences at a Seminar and submitted written reports of their projects.

It is largely from the experiences of these 34 teachers, 14 from 1997 and 20 from 1998, and in these 16 schools, that this paper will illustrate the IVAC approach, how it has worked in practice. These experiences will also illustrate how questions of narrative, feminist and local "northern" perspectives, not articulated directly in the original theorization, came into play.

Action, Action Competence, and Narrative

It was at the meeting of July, 1998, the first gathering of all the Portuguese participants in the IVAC experience in Portugal, that the first explicit reference was made to a relationship between our theorizing of action, action competence, and narrative (Fontes, 1998). In an attempt to deepen our appreciation of the nature of action—until this point more or less limited to the ideas of "conscious decision-making" and "contribution to the solution of a problem" (Uzzell et al., 1996, p. 38-40)—two new definitions were studied. The first, that of Hansen (1995), specified not only the concept of action as "a choice consciously directed toward the attainment of a defined objective" (p. 105) but also action competence as "the capacity of the student to make deliberate choices directed at specific objectives and also his (sic) capacity *to give reasons for these choices*" (p. 114, our emphasis). The second, that of Bem and Looren de Jong (1997), defined action as "what a human agent does . . . as distinguished from mere movement, and also from behaviour, in the technical sense of behaviourism (observable responses) . . . . To explain or *offer an account* of an action is to ask or *give reasons* for it, instead of causes" (p. 155, our emphasis).

The italicized sections led to the notion of telling stories, the stories of why one does things. We found, in Polkinghorne (1988), not only a confirmation that our notion of telling stories had something to do with action competence, but also descriptions of phenomena which had in fact characterized the project experiences as they were carried out:

> Human beings make decisions about what they desire and about what they have to do in order to satisfy these desires. We remember stories of our past and of that of our community, and these stories furnish models of how it is that our actions are connected with their consequences. Using these recounted models,

> we plan our strategies and interpret the intentions of other agents. (p. 135)

The process described here is very much what happens in the investigation phase of IVAC when children interview and talk with older community members about their community, its past and present, and when they contact and negotiate with community members and organizations about the actions they might take in order to effect change in those communities.

At this meeting, it became clear that narrative was not only a means used in the IVAC approach for investigating, visioning and planning action. It was also the preferred means of the teachers for reporting and evaluating their own experiences with environmental education while using this approach. The facility, the feeling, and the cohesion of the oral reports presented exceeded by far these same qualities as presented in the formal written, or illustrated (posters), versions of the same.

Since then, the "telling of their stories" has become part of the annual process of IVAC training and implementation. In October of 2000, at our first International Congress "Environmental Education and the Contemporary World," teachers participated at the side of established researchers and environmental education experts, telling the stories of their experiences and of the results they achieved. Translating these accounts from oral to written form has been somewhat more costly for many teachers, but they are beginning to publish, both in reports (Ramoa, 2001) and in the Proceedings of the Congress.

What kind of stories do teachers tell? Here is what one says about the work developed with, and by, her students:

> The investigation phase stimulates a sense of work to be done, of enthusiasm, of looking out for things—in short, a sense of responsibility. The vision phase stimulates imagination and creativity, the questioning about what we really value. The action phase incites in the students the discovery of how to act in order to get things accomplished, and, in this way, they discover that they, too, can accomplish positive and even important things. As a consequence, and evaluating the change they made, the last of the phases, there's established a sense of usefulness: after all, they are important in the community, because they contribute to change something, in a positive way. The sense of collaboration that is established by way of the actions carried out is extremely important, eliminating completely the sense of competition, an element that is so rooted in our contemporary society (unidentified teacher).

This teacher is "telling her story" in more than one sense. She is telling the story of an environmental project carried out by her class, of the effect on the children of the series of actions—some investigative, some environmental. But she is also "telling her own story," the story of what happened to her and to her class as a consequence of the series of pedagogical actions (choice and doing of the IVAC model) that she herself selected and implemented. In this way, she is "furnish[ing] models [to other teachers] of how it is that our [pedagogical] actions are connected with their consequences. Using these recount-

ed models, [she is making it possible for other teachers to] plan [their] strategies" (Polkinghorne, 1988, p. 135) for transforming their teaching practices in similar ways.

Thus, this "telling of stories" serves two functions traditional in research. At one level, it is a form of collecting data about outcomes (outcomes, at least as seen by the teachers involved), a form of evaluating the impact of an educational intervention with the students. At another level, it is itself a form of intervention, a kind of treatment that other teachers, in and through their hearing, receive and can decide to adopt or experiment with. This is a use of narrative which conflates the traditional distinction between independent variables (treatments) and dependent variables (outcomes) and which facilitates a professional transition from teacher to teacher-researcher. Teachers who are "subjects" in one phase of the process, "receiving" the IVAC training as a treatment or independent variable, share with the investigator the production of information about the dependent variable, the outcome of that treatment (in terms of impact on the children, on the environment and on their own teaching practice). They then become partners with the investigators in "administering" the treatment to the next group of trainees, or to other teachers who hear and read their narratives.

Women's and Local Knowledge

What types of local environmental problems and issues do the children identify and decide to try to resolve? These have been from the first, and continue to be, largely problems of litter and the disposal of solid wastes (unauthorized dumping). This fact seems to be the result of a number of factors, for example:

- the form of local investigation employed, based heavily on observation and thereby, given the local realities, on what is easily noticed visually and olfactorally;
- a preoccupation on the part of teachers with the selection of a problem which is not too difficult for the children to handle (and not very politically sensitive) on their first IVAC attempt; and
- a tendency on the part not only of teachers but of other segments of the population to consider not littering a sign of civic and environmental virtue.

When the problem is not merely personal littering but the treatment of solid wastes, there is obviously more room for effective visioning and action on the part of pupils.

From time to time, however, groups of children have moved outside of this limited problem definition and have identified and chosen for resolution other environmental issues. These issues were more uniquely local and often identified, not only through observation, but also through interviews with

members of the community, and by listening to discussions among adults. Some of the more interesting of these have been traffic problems near the school, school and school yard beautification, the presence of drug addicts in the park near the school, and the disappearance of traditional knowledge, skills and practices in the community population. More specifically, they included the falling into disuse of traditional medicine and of the use of water-powered mills for grinding corn and olives. Women's skills were particularly involved in projects on local medicinal plants and on bread-baking with traditionally stone-ground flour.

Perhaps one story, told in detail, will give an idea of the richness of the school-community interactions, including the storytelling, that can be put into motion by an IVAC project.

This case is one among seven very small, rural one- and two-teacher schools. These schools were grouped in a rural schools' project whose co-ordinator is an IVAC trainer. All seven schools initiated the project with a local survey and a field trip (seeing, hearing, smelling, and feeling, recorded in writing, drawings, and photographs) through the village and then to the nearest water source, typically a small stream or a river where some water tests were applied. The first unpleasant discovery was almost always litter in, or along, the streets, as well as deposits of trash, sometimes along the roadside in treed areas or in piles near (and often overflowing) the collection sites, which were of inadequate size and with inadequate collection service. To their intense satisfaction, however, most of the groups found that the local waterway was not polluted, at least not according to the simple tests provided. The surprised delight that this accorded provides evidence that media coverage of "polluted rivers" as a general problem can create the impression (only in young children?) that pollution is more widespread that it is—almost a universal condition. In turn, this may contribute to the notion that there is nothing left worth preserving.

In this group of schools, it is not surprising that visions focused on the waterway and its surroundings—the laundry areas, the abandoned water mills for grinding flour from grain or for pressing olives, or the riverside beaches. In the case of the school we are considering, the children's attention first settled on the litter left behind by the village women after laundering clothes in the river: boxes of detergent and bottles of bleach. It did not occur to them to question this age-old practice as a source of pollution due to these modern products; the good water-testing results probably contributed to this oversight. Instead, they thought of posting reminders to the women to clean up after themselves, and sought town council's authorization to post these placards. On this second mission, however, several children raised the issue of the neglected, and deteriorating, state of a small beach which existed near the same area: brush was overgrowing the area, there were no amenities, and the dirt road access was essentially overgrown and impassable. Based on these observations, the children decided to adopt the river beach as their area of

intervention. They began with a presentation, in drawings and a maquette, of their vision for the area, which included better access, a children's play area with swings and slide, and a small refreshment stand. They directed a letter to the town council and received its president at the school for an explanation of their project. Various parents agreed to co-operate, including the owner of the water mill who agreed to set the mill functioning in order to show the children how the process had worked. Town council workers began to cut out the underbrush that covered the mill and blocked the dirt road. While cleaning up what remained of the sandy beach area, the children discovered several submerged boats and asked the teacher about them; it was February or March and nearly a full year since the boats had last been used, and the children were evidently unaware that this submersion was part of the preservation process for the boats used in a relatively recently revived custom of carrying the Easter fire across the river to the most isolated parish of the council, one which had been, for many years, without a bridge access.

The children were fascinated with the story and, this year, followed all the preparation with interest; the major preparation consists of the making, by the local women, of the thousands of small paper flowers for decorating the boats which will bring the various groups across the river to the village of São Bento (St. Benedict). The priest and acolytes used candles to light the Easter fire and, then, with the crucifix (the kissing of which is the main Easter ritual), the local confraternity members, and the musicians of the community band, the boats crossed the river. (It was noted that almost all of the work for the event was done by women, while most of the places of honour in the boats were occupied by men!)

This event was, therefore, in the year of the project, used both as a basis for a study of local history and geography and as an occasion for campaigning, by the children, for their beach improvement idea. The fact that large numbers of tourists now attend this "bridge of the boats" event on Easter Monday contributed to sustaining the growing sense of pride of place among the children. Within two years of the initiation of the IVAC project, improvements in the form of a retaining wall and beach sand, as well as a renewed access road, had been achieved. The water mill is set functioning from time to time as an additional tourist attraction. There is a lively awareness of the desirability of preserving the river in its pristine state, building support for controlled uses (domestic and industrial) above the village, specifically controls that can be exercised by the Peneda Gerês National Park which lies not far above the village and where the river, interestingly enough called the River Homen (Man River), rises.

Stories and Action Competence

The experience and reflection shared to date by the participants in the work

with the IVAC model in Portugal support the existence of a fruitful relationship between stories and action competence. They suggest that the "action" in IVAC is essentially *situated action*, in the sense that Bruner (1990) defines, "action situated in a cultural setting, and in the mutually interacting intentional states of the participants" (p. 19). And that this mutual interaction of intentional states takes place through the telling of stories that are dependent on:

- the "capacity to render experience in terms of narrative" (Bruner, p. 97);
- the capacity of the community members who tell local history;
- the children who hear these tellers and, in their turn, tell the story of their hopes and dreams and plans to realize them; and
- the teachers who tell the stories of change and growth in their pupils, in their school communities and in their own professional practice.

This capacity is not only an element of situated action; it is also an element of action competence; it is one of the capacities stimulated and developed by the exercise of the IVAC approach. The children who insisted on coming to the July 1998 meeting to "tell their own story" had never before taken such an action. The trainers who came to me at the conclusion of their training course, to "tell me the story" of exactly what they needed to do before offering training, had not been used to taking such actions with their trainers.

How may the practice of the IVAC model contribute to an increase in the capacity to render experience in terms of narrative? One possibility is that the IVAC model *is* a narrative; that is, it "emphasiz[es] human action or 'agentivity'," it allows for "a sequential order [to] be established and maintained," it "requires a sensitivity to what is canonical and what violates canonicality in human interaction" (e.g., in the hearing and negotiating of visions and actions), and it "requires something approaching a narrator's perspective", it "cannot . . . be 'voiceless'" (Bruner, 1990, p. 77). The IVAC practice offers a voice to a class or school of children and to the school community's members, a voice in which to speak about their environment and to influence it. "[H]uman beings are viewed as coming into contact with, *and creating, their surroundings as well as themselves* through the actions in which they engage" (Wertsch, 1991, p. 8; our emphasis).

The IVAC practice also offers a special opportunity to teachers, especially to teachers who have been trained and have practiced in school systems with largely traditional and transmission-of knowledge educational practices. In a way, it gives them the chance *not to* be the only voice in the classroom, to contribute to the creation of "mutually interacting intentional states of the participants" (Bruner, 1990, p. 19)—the children, the parents, the community *and the teacher*. Through this experience of respectful and successful interaction, teachers may gain courage to assume their own voice in the face of Ministries and Departments, in the face of textbook authors and workbook publishers, in the face of their own colleagues who counsel "not rocking the boat."

Pedagogically action competent teachers and environmentally action competent communities are the goals which the IVAC story sets out to relate and to create.

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