
Ecology and Ethics in Participatory Collaborative Action Research: an argument for the authentic participation of students in educational research

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ABSTRACT A conception of action research is offered that is collaborative, participatory, targets ethical issues and includes students. Collaboration is 'organic' in that all members share the goal of the research and are interdependent in pursuing that goal. Participation is authentic, requiring a continuing negotiation of planning, roles, power differences and language. An ecological approach to ethics is examined in which the research community is regarded as an interconnected, interdependent, holistic system of language, relationships and ideas. A rationale for the authentic participation of students in research is offered based on ethical requirements, improved research benefits and professional enhancement.

Ecology

Relationships and interconnections describe the ecology of the classroom community. What affects a single member affects the entire class. There is also a symbiotic exchange between the classroom and its environment. That environment includes the physical structure of the school, the administration, the atmosphere of the school community, parental involvement and the influence of the community at large. Individual students are interdependent with their classmates, while all are interdependent with their environment. There are levels of interdependent communities. These can be listed from the microscopic to the global: from the individual as a coherent organisation of body parts and cells, to the family at home, to the classroom at school, to the school as a coherent organisation of classrooms, to the community around the school, to the city community and its politics, to provincial, national and global communities.

Fritjov Capra (1983) avoids the use of the word hierarchy to describe this leveled kind of organisation. He prefers the term stratified:

To avoid confusion we may reserve the term 'hierarchy' for those rigid systems of domination and control in which orders are transmitted from the top down. The traditional symbol for these structures has been the pyramid ... That is why I have turned the pyramid around and transformed it into a tree, a more appropriate symbol for the ecological nature of stratification in living systems. As a real tree takes its nourishment through both its roots and its leaves, so the power in a systems tree flows in both directions, with neither end dominating the other and all levels interacting in the interdependent harmony to support the functioning of the whole. (Capra, 1983, p. 282)

In organic, adaptive systems, connections, links, or relationships among parts are the focus, rather than the parts alone. In a classroom that promotes authentic participation, interactions among students and relationships throughout a stratified school structure are important. Individual qualities lose their meaning when considered in isolation. Talents or skills are valued when they enhance the community. Individual problems and needs are a concern for everyone. Knowledge is shared, interactions are encouraged and the teacher, who is in a traditional position of authority, learns from students and actively seeks to share decision-making about various aspects of the classroom community.

For the purposes of the following discussion, the classroom and those immersed in classroom research, are considered to be a dynamic, adaptive, 'living' system in which ecological considerations are paramount.

A Definition of Action Research

Action research is when people reflect on and improve their own work and their own situations by tightly linking their reflection with action and making their experience public, not only to the other participants, but also to other persons interested in the work and the situation (Altrichter et al, 1991). Data are collected by the participants themselves, they participate in the decision making, power is shared democratically, and members collaborate. Reflection is a key characteristic of action research. The practitioner-researchers self-reflect, self-evaluate, and self-manage the research autonomously and responsibly. More concisely, McClutcheon & Jung (1990) define action research as the inquiry teachers undertake to understand and improve their own practice.

Collaborative action research demands that research becomes practitioner-based, and that all theorising and practice takes place in the context of the classroom setting. 'Praxis is the notion that through action, theory is developed; that theory is in turn modified through further action' (Houser, 1990, p. 59). The understanding that results from this research is

not necessarily concerned with global issues of education, but rather with particular learners and specific cases.

A perspective that seems suitable for classroom research is one of participatory, collaborative action research. It is ecological in the sense that it includes all the significant actors in a classroom research setting, including the children.

Ecological Ethics in Research

Ethics in research is problematic, particularly in the social sciences and especially in education where young children may be involved. It is impossible to create standards to address all potential research situations and the standards that we do create tend to be non-specific, sloganised ideals. Ethical responses to unanticipated events are difficult to rehearse. They are situation specific. A code of ethics, therefore, has limited value. Punch (1986) says 'A code can be useful as a moral pathfinder sensitising students, researchers, and supervisors to ethical elements in research prior to, during, and after a project' (p. 80). However, the range of unpredictable, complex and unique surprises in the field make the non-specific nature of codes of limited use in many cases. Furthermore, it is difficult to reach a consensus regarding ethical standards that resists varying interpretations. In action research, referring exclusively to a generalised code of ethics seems insufficient or perhaps dangerous. 'We have relegated moral discourse to the periphery of our discussions ... while making scientific discourse ... our primary concern' (Schwandt, 1989, cited in Flinders, 1992, p. 101). In collaborative action research, I suggest that moral discourse and moral reflection must be a central theme, and included in constant negotiations of authentic participation, power issues and language.

David J. Flinders (1992) traces varying orientations of ethical thought. For the purpose of this discussion, his commentary on utilitarian and ecological ethics provides a particularly useful contrast. Utilitarian ethics is the most familiar kind of ethics and is commonly the type used in university ethical review committees. This type of ethical thought is based on utility. 'An action or decision is considered moral if it produces the greatest good for the greatest number' (p. 102). Ecological ethics is a conception of the world, environments, or communities (including classrooms) as unified systems. 'A chief characteristic of all ecological systems is that no part is capable of exercising unilateral control over the entire system' (p. 109). Members of such a system are concerned with language, relationships and ideas in a holistic regard for their culture. Each member, whether a teacher, student or researcher, is an integral part of a co-evolving whole. As such, it is not enough to make discrete judgments of the morality of specific actions or decisions. Rather, there is an ongoing process of negotiating power structures to maximise the inclusion of all. An ecological approach to ethics fits well with the collaborative action research methodology to be described here. It is compatible with the participatory aspect of the research and setting, and the focus on ongoing interactions within the community.

Flinders analyses research ethics in three areas:

- recruitment;
- fieldwork;
- reporting.

I summarise Flinders' (1992, p. 113) terminology in Table I.

	Utilitarian	Ecological
Recruitment	Informed consent	Cultural sensitivity
Fieldwork	Avoidance of harm	Attachment
Reporting	Confidentiality	Responsive communication

Table I. Ethical frameworks.

In utilitarian ethics, informed consent is the basic right of self-determination. Participants should know what the research is about and agree to their involvement. Action research, of course, does not allow for a very high level of predictability. Therefore, it is difficult to be able to fully inform a prospective participant to gain their consent. Similarly, avoidance of harm is difficult to guarantee. Such subtle events as causing stress or risking a professional reputation may inadvertently occur even though this was not the intent of the researchers. There is no way to predict or avoid such accidental situations even if the participants have given consent. Although we may promise to avoid deliberate acts that are harmful, there is a range of potentially harmful events beyond our control. Promising avoidance of harm can be misleading, especially if we have an ethical concern regarding all consequences of research activities. Confidentiality is a very difficult thing to protect in qualitative research, which depends so much on rich descriptions: 'the better the research, the more readily others can recognise the participants' (Flinders, 1992, p. 104).

Flinders also examines recruitment, fieldwork, and reporting in an ecological framework. Ecology refers to a set of interdependent relationships. It is a view of the world in terms of unified systems. The classroom, then, is a holistic cultural environment organised by language, relationships, and ideas. Beyond just informed consent at the start of the research, cultural sensitivity must be an ongoing focus of reflection and discourse. More than avoidance of harm, ecological ethics demand that we recognise the individual as part of a larger system. Therefore, protection of the entire environment is necessary, including the attachment of every individual to the whole culture. To damage one part of an ecological system is to damage the whole and vice versa. Responsive communication in reporting, as contrasted to confidentiality, is necessary in ecological ethics. The language that is used must maintain the culture, rather than unilaterally controlling it through language that is outside of the growing relationship. The holistic nature of ecological ethics makes it a good match

for participatory collaborative action research, which also embraces the authentic participation of all partners in creating a community of inquiry through discourse.

It is important to note that this framework was constructed to aid in conceptualising approaches to ethical thinking. In practice, there is much overlap. Flinders (1992), rather than pursuing one best system, seeks 'a frame of reference that is able to encompass multiple points of view' (p. 101). Many orientations of ethical thinking have value. For instance, we probably do not want to do away with university ethical review committees of research, even though they lie within the utilitarian concept of ethics that is, indeed, limited. That said, an ecological conception of ethics is relevant to this discussion. This model of research focuses as much on process and reflection as on solutions and standards. Those participating in this kind of research, rather than only promising to meet standards before beginning, continuously work towards creating a community of cultural sensitivity.

all research is context-bound, and ... the circumstances encountered in a given study will always interact with various ethical frameworks in unpredictable ways. Researchers must learn to 'read' ethical concerns as they emerge, anticipate relevant considerations, and recognize alternative points of view. In qualitative research, these skills are not marginal; they are at the heart of what we do. (Flinders, 1992, p. 114)

My own doctoral research was very nearly abandoned in favor of a conceptual dissertation because of my initial orientation in utilitarian ethics as embodied by the university ethical review committee. Within this perspective, I could see no true ethical approach to research involving children. I could not control the unpredictable events of a classroom so I could not be sure that I would never accidentally do harm. However, as a primary teacher, I realised that every day we take ethical risks with children. We make a constant renewal of our professional and moral promise to do our best in regard to the children and our colleagues. Flinders' work allowed me to understand and extend this appreciation of a teacher's daily interactions, which imply an ecological orientation, to ethical research.

In fact, my research was deeply immersed in an appreciation of classroom ecology. It examined the potentials and difficulties of democracy in a primary classroom. As such, my research partners included a dedicated and enthusiastic grade 1/2 teacher and 22 children aged between 6 and 9 years. This was an extremely diverse group in terms of ability, language and cultural background. The children's research role included being reflective about their learning activities and other classroom experiences. The teacher's role was to provide her perspectives and feelings about the changing interactions in the classroom, and manage the implementation of new ideas and strategies. My role ranged from consultant to teacher to classroom assistant as the situation demanded. The main challenge of the research was to find ways to include everyone in our discussions and

activities. I will draw on these experiences as a context in which the concepts described here were applied.

Rationale for the Inclusion of Students

The goal of educational research of any kind is to improve the learning situations of students. Students, regardless of age, are very much involved in any research on education whether they are given the status of participants or not. In fact, they are central players. If we believe in the principle of authentic participation in research, then we are obliged to recruit students as research partners. Indeed, we are ethically, logically, and professionally obliged to invite students to be part of participatory collaborative action research. If we value the research benefits that could result from reflections on learning by the students themselves, we must value their participation in research. If we believe in the learning benefits to students who have the opportunity to actively plan, implement and evaluate their own learning strategies, we will be enthusiastic about participating in such a learning community.

Clearly, there are other parties, such as parents, administrators and other school district staff, who have a vested interest in research in the classroom, at least at the level of informed consent. In practice, they are a significant part of the ecology of the research context. However, for clarity in this discussion, I focus only on the university-based researcher, the classroom teacher, and the students.

I will now discuss the ethical obligation to include students in their own research, the benefits to research that might result and our educational interests, namely gains in learning by all involved in the research. I shall then discuss in more detail how these obligations and opportunities relate to four major considerations of participatory collaborative action research.

Ethical Obligation

Whether or not we invite students to be our research partners, they are involved in our research. It is ultimately about them that we are researching. In traditional research, we are minimally bound ethically by having to obtain informed consent. Often, consent for student involvement is given on their behalf. So, although they are central to the research, they are generally silent in influencing their own involvement in the research. If cultural sensitivity is sought, rather than mere consent, students must be recognised as part of the ecological whole of the research team. To avoid detachment, rather than merely protecting them from harm, they must be part of the ongoing discourse to make real contributions to the determination of research goals and plans.

If responsive communication is needed, rather than just confidentiality, this implies that students share the language of the research and contribute to the reporting. This does not mean that students will have an unreasonable burden of learning a difficult new language or have to

report in a highly academic sense. Rather, it means that the language of children will gain acceptance in the research environment and that the variety of ways that children express ideas will be included as an aspect of reporting.

Benefits to Research

The addition of the students' perspective in planning, implementing, reflecting and evaluating provides the potential for unique understanding in itself. To restrict the voices of students through non-inclusion is to erect a barrier to communication. We would then have to work to break down that barrier to gain access to the thinking of those we are studying. If, instead, we include student voices as part of the research discourse, the thoughts of these partners will be much more readily forthcoming. Additionally, the unique perspectives of students can provide valuable insights into classroom structures. What activities are motivating? Which result in what kinds of learning? What conditions promote the best engagement? Finally, students' involvement in reporting research, integrated into their ongoing learning activities can provide alternate ways of looking at outcomes and alternate means of reporting. Journals, stories, drawings, dance and metacognitive activities, can all be considered part of the reporting process, presenting data in its natural context. Clearly, reporting is more broadly conceived here than it is with standard research practice, but this widens the audience and engages the participants.

Educational Interests

Action research can enhance teachers' professional identity by giving them some autonomy in the decisions regarding their own practice (Tripp, 1990). Similarly, increasing the autonomy of students in areas of research recognises their identity as research participants and may increase their ownership of learning:

As teacher researchers, our primary responsibility is to our students. We need to balance the demands of our research with our other professional demands. This issue becomes far less troublesome when classroom inquiry becomes an intrinsic part of how we teach, and when students take an active role in our research – and their own. (Zeni, 1998, p. 16)

Zeni's statement challenges the dichotomy of teaching and learning, the assumption that one party teaches, while the other party learns. Rather, for this perspective, the activities of university workers, teachers and student partners are continuing as all parties teach each other and learn from each other simultaneously. Students, as well as teachers or university researchers, learn from their inquiries.

Including children in research does not compromise their role as students or coerce them into an adult agenda. Their role is still that of

learners and much of their school routine would necessarily remain unchanged. However, the metacognitive activity of reflection and discussion may be increased for students, teachers and researchers alike. This is an adjustment in attitude and self-perception in a community of inquiry. Students begin to gain more control and ownership of their learning and are self-reflexive. In reflecting and sharing their understandings, the understanding of the whole learning community is enhanced. This is participatory collaborative action research.

Considerations for Effective Participatory Collaborative Action Research

Four prominent issues arise in the literature that provides challenges to effective action research. They are collaboration, authentic participation, power and language. An appreciation of the ecology of the research setting and practice is at the core of these concepts. Inclusion and interconnectedness permeate the discussion. These terms are defined and explored in the following description of an idealised conception of participatory collaborative action research between schools and universities. For action research to be truly participatory and collaborative, it demands that students also enter an organic collaboration, have authentic participation, work to resolve power differentials and share the language used by the community of inquiry of which they are a part.

Collaboration

Betty Lou Whitford (Whitford et al, 1987) compares three kinds of collaboration: cooperative, symbiotic and organic, in order to frame the kind of arrangements that best lend themselves to the linking of reflection and action.

The cooperative arrangement is usually project orientated, with defined starting and ending dates. One party is the provider of service and the other is the receiver. An example is a university-sponsored summer institute for school staff. The symbiotic arrangement is characterised by reciprocity. One party helps the other in return for their help. For example, the researcher is allowed to use the school for research in return for designing a staff training day. The organic arrangement addresses ecology. It identifies issues that are jointly owned. Each party can independently provide parts of the solution to a goal. One party by itself is unable to achieve the goal. Whitford et al term this kind of collaboration, necessary for effective action research, 'boundary-spanning' since both parties have a vested interest in the outcome and require each other's assistance to achieve their goals. This interdependence recognises the ecology of collaborative research, which includes both the university-based researcher and school-based participants. Each draws on the assets of the other and each is affected by the other's actions. The ultimate shared goal of both

university education programs and schools is improved education for students:

universities and schools are interdependent agencies that could better serve the public by concentrating on a common agenda. Serving the common good rather than mutual self-interest should be the unifying theme around which collaborative efforts between universities and schools are organized. (Whitford et al, 1987, p. 155)

Working with other people, each with their unique perspectives and preferences can be challenging. Given these perspectives on collaboration and community, this kind of research is not likely to be comfortable. However, it is the sense of discomfort that drives the work of collaborative research. Sumara & Luce-Kapler (1993) state that it is in these times of disagreement and negotiation that we gain insights into ourselves, each other and the topic of investigation that draws us together (p. 394).

It seems that most topics of research in the classroom impact on students and, therefore, would be of interest to them at some level, even if that interest is self-defence. The discovery of boundary-spanning issues is dependent on finding a common language and in facilitating participation. Regardless of the choice of research topic, in an organic collaboration in which partners are ecologically dependent on each other, all partners achieve a consensus on roles that are both of personal interest and of mutual benefit (Whitford et al, 1987). It is not likely that, in the average elementary school, the first issue chosen for research that includes students will be of general school reform nor classroom-wide restructuring (Chisholm, 1992). Rather, important issues of limited scope and high familiarity may be an acceptable place to start.

For example, in my research project which examined classroom democracy, the first issue that was raised for democratic participation during a class meeting was a contentious and, therefore, authentic issue. Some of the older students were excluding and demeaning some of the younger students. The older students would not let the younger ones play soccer with them at recess and even 'made mean faces'. Since this issue was real to the students, they were all engaged in the conversation and a search for a solution.

The second activity in the research depends on the outcome of the reflection on this first step. As the spiral of inquiry emerges, these limited research endeavors could become very significant and sophisticated. Robin McTaggart (1991) recommends that research start small and build a basis for collaboration:

It starts with small cycles of planning, acting, observing, and reflecting which can help define the issues, ideas, and assumptions more clearly so that those involved can define more powerful questions for themselves as their work progresses. (p. 178)

Authentic Participation

McTaggart (1991) differentiates between action research that is institutionally initiated with varying levels of involvement of school staff and participatory action research, which is necessary for effective collaboration. Participation is problematic in research situations where people have different power, status, influence or language facility. There is a difference between the meaning of the words 'involvement' and 'participation'. Involvement means merely to be included where participation means to share or take part. Authentic participation in research requires: '(1) people's role in setting the agenda of the inquiry, (2) people's participation in the data collection and the analysis, and (3) people's control over the use of outcomes and the whole process' (Tandon, 1988, p. 13; cited in McTaggart, 1991, p. 171).

This framing of participatory action research does not allow for the concept of people as subjects in research. That is, the traditional practice of the university researcher doing research on people in the field does not constitute participation. Although research participants in the classroom may have distinct roles, expertise and perspectives, they must have equitable status in initiating, conducting, analysing and reporting the research for there to be a claim of authentic participation.

As previously cited, McTaggart (1991) states that participation is problematic in research situations where people have different power, status, influence and language facility. Each of these concerns present a challenge to the authentic participation of students. As previously claimed, there are no global standards that can be applied as a solution to specific cases. Rather, a collaborative research team must address these concerns on an ongoing and specific basis. It is essential that students have an active role and an equal voice in this continuing discourse.

In the previous example of my research project, the use of class meetings that share governance served as the forum in which issues were pursued, together with reflection and planning for the research content. As a result of several meetings, the class developed a list of seven problem solving strategies to deal with future issues. These ideas were celebrated in many ways: through writing activities, art projects, acting and music. Clearly, various levels and means of participation in research are possible.

Power

Any coming together of people involves politics. This leads to the necessity of addressing issues of power, since participatory collaboration recognises both the autonomy and the responsibility of all the actors involved in research. Whatever the source, power needs to be carefully examined. Even if it is not intended, when schools and universities come together, there may be pre-existing expectations of academic imperialism. This is the result of traditional research in which university personnel often direct the interactions in a top-down approach. It may be that school staff wish for the university staff to take control of the project and direct, rather than they,

themselves, engaging in the decision making required in participatory action research. It is challenging for researchers to exercise leadership without creating dependency (Somekh, 1994).

Clearly, in participatory collaborative action research, joint ownership of the research is necessary, despite differing roles among the participants. However, power differences are subtle and pervasive. Authors on the subject fall short of offering solutions. However, they do emphasise the continuing processes towards suspending power differentials. McTaggart (1991) points to the substantive knowledge that exists in the academy, which can help people to understand that their own subjectivity is likely to be gendered, colonised, nationalised, westernised and capitalistic (p. 174). To address issues of power, group members must change their language, activities and social relationships. They do this collaboratively by deliberately setting aside time to reflect on these matters in an effort to make individual and group decisions. As part of the participatory aspect of their research, researchers must work toward improving their own practices. Regular checks are made to ensure that the least powerful have authentic input.

Rita Irwin (1997) struggled with the contradiction of leading a group of researchers, while also trying to share power through the democratic principles of shared understanding and shared decision making. Irwin rejected the idea that one should abandon their expertise, allowing others to stumble, in the name of sharing power:

Rather, a delicate balance must be maintained so that empowerment of the collective is nurtured while the power of the individual is recognized ... The only way to truly accept this dynamic is to develop a level of trust within the group that allows for reflection and action that constantly examines the effects of teaching and leadership. (Irwin, 1997, p. 10)

Part of her role as a leader was to teach leadership to the others. Consistent with the sense of reciprocity embedded in collaborative action research, she found that the others were capable of mentoring her in significant ways.

With these authors, the important aspect of addressing power issues was not in finding solutions, but in becoming involved in the process of continually reflecting and acting on the distribution of power in specific, contextualised ways. Reflection and action on power issues are an inseparable part of the process of participatory collaborative action research regardless of the overall research topic.

The issue of power is, indeed, problematic in proposing a partnership in research with students, particularly children. On one hand, there seems to be a logical and ethical argument for the inclusion of students, but on the other hand there are enormous methodological barriers due to the status of children in western society. Lynne Chisholm (1992) talks about the wide endorsement of symmetrical or democratic relations in research, especially for action research. Bridging the cultural distances of race, gender and class is being attempted optimistically and, at least in principle, seems possible. Bridging the gap between adult and child in research may seem too

daunting for many to make the effort. However, some practitioners and researchers are providing excellent examples of including students of all ages as partners in their research.

Many authors (Carr & Kemmis, 1986; McTaggart, 1991) claim that action research should be a participatory and emancipatory process. Its purpose is to enact social change. Although I do not anticipate a classroom revolution where students dominate the teacher and control without reason, there is an opportunity in action research for students to assume some negotiated autonomy with regard to their own learning in the current research. There is also the potential for students to acquire an intimate knowledge of social activism and experience the possibilities for social change. This is a chance for students to learn about leadership. In action research, the focus is not only on an end product, but is also on the process and the discovery of new questions. If this proposed research community is committed to the continuing process of renewing participation, addressing power differentials and developing discourse, then the focus of this research will be as much on the power arrangements as on the subject of research.

In my research project, I first had to find a teacher with similar interests, and then negotiate the format and initial direction of the research. Then I had to obtain parental consent to satisfy the ethical review for the university and the school administration. Then I also had to ask for the consent of the children to assist me and their teacher. This required a lot of explanation of the terms and the intent. This topic was broad enough for all to find some value in participation. The children did very little differently than they would have normally, other than to reflect on their daily activities and have those reflections recorded. The children began to take on more and more responsibilities in the research. The following is an interaction that took place during that research, where 8-year-old Adam took an active role in collecting data. He was looking for a change in routine and decided he would use the tape recorder to interview his teacher, rather than his classmates, in regard to improving the class meeting format:

Adam: How would you like to change the class meetings?

Donna: Adam, I would like to change the class meetings by having more kids involved. Maybe if we could somehow figure out a way that people would talk to each other in partners more often to get more ideas. I'm thinking what is it we need to do to get everybody thinking?

Adam: To make it less boring, let's do some kind of activity with the agenda items instead of just talking? (Collins, 2002, p. 77)

This brief exchange illustrates how a child research partner was valued in his ability to elicit important data, to use equipment to record data and to make significant suggestions that affected the course of the research. Adult questioning may not have revealed the need for more activity during class meetings.

Language

As McTaggart (1991) states, language and discourse are a central aspect of any culture (p. 173). Research cultures, in particular, are of interest. In collaborative research, each group brings with it unique patterns of language that are formed within the group to enhance communication, thereby constructing the culture of the group as well as individual identities. However, when school and university cultures come together, language can be an obstacle between the two groups.

Somekh (1994) describes the continual tension over discourse in their collaboration. Even the word 'research' itself seemed to alienate the teachers. Similarly, substituting non-specialist terms for academic terms changed their meanings, lowered the status of the project in the eyes of the academy and simply became patronising. Instead, both partners learned the language of the other and moved from one discourse to the other as the circumstances demanded. However, as with the issue of power, the continuous confrontation on discourse provided a challenge that strengthened their collaboration. Once again, reflection on the ongoing process of negotiation is as relevant as finding solutions.

Teachers and children generally participate in language development as a normal course of events. Collaborating in research, with an emphasis on discourse, will accentuate the challenge and the enjoyment of this process. Of particular interest is the language of reporting. Rather than relying on university journals as the primary source of publishing results, teachers may wish to publish papers for their peers and provide workshop presentations, and students can present their new understandings through a range of media, such as posters, stories, poetry, plays, multimedia or dance. These expressions could well be highlighted in the university journal report and the teachers' reports. If they are a central focus of reporting, perhaps a source of data, then there is a likelihood that students will understand some of the content and intent of the reports of the other research partners. Additionally, more interest could be generated in the research by expanding the audience beyond the university community to include other teachers, administrators, parents, classmates and other members of the community at large. The use of class web pages, internet postings or links with other classrooms, schools or districts are other possible outlets.

The example of 8-year-old Adam is salient here. In fact, a major finding of this study was that young children need to be active physically and verbally in order to fully participate in both decision making and learning. This led to the use of role play during meetings so that these children, whose verbal capacities had not yet fully developed, could participate in expressing their thoughts and feelings.

Adam made an authentic, valued contribution. This was not within the ability or inclination of all of the students in that class, but the research team was open to and searched for similar significant contributions by all participants.

Summary of the Research Model

This is a largely conceptual exploration of action research and much of it is speculative. Based on a wide range of perspectives, many of the more salient features of various authors' descriptions have been synthesised to construct an idealised model of participatory collaborative action research, which includes the participation of the students themselves. At the core of this model is a commitment to reflection and discourse, which continuously and dynamically renews the classroom-based research community. It recognises the ecology of the classroom in that all class members are interconnected. What affects one affects all. The model focuses not only on the research issue, which is mutually owned through organic collaboration, but also on ecological ethics and authentic participation. It seeks to address issues of language, roles and power differentials.

The proposal to include students as authentic participants may seem to some to be an insurmountable challenge (Chisholm, 1992). However, there are examples of action researchers who are engaged in a process of including students of all ages as partners in research.

At the university level, Owen van den Berg (Lee & van den Berg, 2003) describes instituting a Master's Program in action research in South Africa in 1987 to promote educational and political transformation at the time of the apartheid regime. Action research took place in the graduate students' classrooms and the story of the Class of 87 became part of van den Berg's doctoral research. Students were actively encouraged to evaluate the program at the end of the year and again in 1993. At the latter meeting, students validated van den Berg's draft chapter on the research and he also incorporated the students' feedback into a reworked chapter. He then had the students again validate that these additions were accurate and fair.

At the secondary level, Mariam Mohr (2001) describes her grade 10 students variously as co-workers, co-researchers and collaborators, and emphasises the need to share credit for classroom research with students. Her classroom action research was very transparent, with students drawing her attention to key events and making suggestions about log entries.

At the elementary level, my research partner still continues to work with children as young as kindergarten in a participatory way that respects the ecology of the classroom. Children are involved in classroom decision making where appropriate and, where possible are given explanations for what they are learning and why. Children's input allows her to modify her teaching according to student needs and styles, and helps her to adjust her practice in increasingly productive ways. The insights gained from these interactions with young students are shared at staff in-service days, conferences and university courses. Student work is shared with these adult audiences. Also recounted are those salient conversations with children that are significant in expanding the knowledge of professional teachers.

While these teachers provide examples of efforts to include students as research partners, some authors (Flinders, 1992; May, 1993; Davis et al, 2000) also suggest an ethical obligation, hope for improved research

methods and anticipation of significantly enhanced opportunities for learning by all involved in the research.

Of particular significance is that the preceding discussion does not provide a solution for ethical, inclusive research. To the contrary, it is doubtful of solutions and, rather, focuses on the ongoing processes of negotiation and continual adjustment of the methodological framework. The change recommended is a subtle shift in attitude resulting in more challenging reflection. Granted, all participants enter the research agreement with their own agendas and there will be asymmetrical apportioning of power. The attitude shift is in recognising the importance of each person's significance to the setting, and in actively and authentically searching for ways to respect each person's contributions. All participants are regarded as ecologically essential to the whole.

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