

Number

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Improvement of Instruction Series

Collaborative Action Research: Experiences and Reflections



The Alberta Teachers' Association

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Monograph Number 18

Terry Carson

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Foreword

Professional development activities are devoted to the improvement of teaching practice. Yet, it is not always true that teaching is transformed by attendance at a conference or a professional development day. Activities which really change teaching practice have personal meaning and application. The professional nature of teaching compels teachers to engage in constant inquiry, critique and reflection. As teachers, we are always asking questions about the quality of our own work. We continually review and criticize our own efforts and reflect on how we can improve our teaching practice.

Action research can help to transform teaching practice. Research questions are of interest to the teacher and the results of the research activities have personal meaning. There are many similarities between the professional qualities of diagnosing, prescribing,

implementing and evaluating and the activities essential to action research—planning, acting, observing and reflecting. By collaborating with resource personnel, teachers can ask questions about their own teaching and teaching situations and obtain meaningful answers which have the potential to alter individual teaching practice.

Edited by J-C Couture and Terry Carson, the papers in this monograph are drawn from action research activities conducted by teachers and university personnel in the spring of 1987 in Edmonton, Hinton and Edson. The contributors participated in a graduate course on action research offered by the department of secondary education at the University of Alberta.

This is not the first time the Association has published a monograph on action research. Written by E J Ingram, the first monograph in the Improvement

of Instruction Series, published in 1959, was devoted to improving curriculum through action research. Ingram and F G Robinson supplemented that publication with a guide to classroom research which first appeared in 1963. Both efforts were dedicated to assisting teachers to bring scientific thinking to bear on classroom problems. The focus of this monograph is different. It encourages teachers to ask questions about their teaching and to apply commonsense answers to individual teaching practice.

Action research continues to be an appropriate transformative activity which has the potential to constantly improve teaching practice—a goal all teachers embrace as a fundamental quality of their own professional ethics.

GORDON R THOMAS
Executive Assistant

1988 01

Editors' Preface

This monograph represents the efforts of a number of educators to widen the scope of their understanding of their educational practice. These efforts are discussed within the context of an emerging field of inquiry called "action research." Action research is not new. Neither is it firmly established in the academic world as a universally accepted and structured field of social science research. As readers will soon discover, opinion on the very nature of action research is as equally divided as opinion on what action research can do for educators. In a small way this monograph is a contribution to the dialogue about the meaning and purposes of action research.

Both the meaning and the purpose of action research are inextricably linked. It can have no meaning without an understanding of its underlying purposes and practices. What can action research mean for the teacher in the classroom? Essentially, action research as a distinct form of research, is made up the following ethical considerations and knowledge bases.

1. It is initiated to solve practical problems of teaching and/or school life in general.
2. It requires collaborative action among teachers (with or without the expertise of outsiders).
3. It involves educators who share a common set of ethical commitments (that is, to improve teaching and the quality of life in schools).
4. It is essentially emancipatory and liberating (in that the process of action research typically leads to the unconscious and conscious unravelling of the limits to educational practice).

This last characteristic of action research suggests a second thread of why action research is vital now. Action research can become a "focal practice" of educators committed to reflecting critically on the realities of their practice. A focus is what allows us to give meaning and context to our surroundings. As Albert Borgmann suggests, "to focus on something or to bring it into focus is to make it central, clear and articulate." Focus, Borgmann goes on to say, is what is missing from our contemporary world dominated by extraneous technological progress (1984, 196-7).

The Latin word "focus" literally means the hearth—the centre of the home. In ancient Greece, a baby was initiated into the home by being carried

in and placed before the hearth. As Borgmann suggests, the hearth acts as a central point for family activity in both historical and contemporary homes. A focal practice then becomes simply an extension of the function of the hearth: an action that reorients us to an essential understanding of what it is we are doing in education.

As action research is added to the repertoire of research practices of the family of educators, it is our hope and expectation that it will become a focal practice for the educational community. With increasing public demands being placed on the schools, coupled with declining resources, educators need a focus. We need a hearth.

Just as a family reunion or a holiday celebration are focal practices of the family, action research may be one such focal practice for building the solidarity of the educational community. We should notice the nature of this focal practice as much as the subject matter of the projects themselves. The reports in this monograph are not so much specific educational concerns (for example, gifted education), as they are about the focal process of action research. Both content and the process should be kept in mind when reading these accounts.

Terry Carson
J-C Couture

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Introduction

Themes and Variations in Action Research

Terry Carson

Dr Terry Carson is an associate professor in the department of secondary education at the University of Alberta. An area of ongoing interest for Terry is action research; other academic interests include social studies curriculum and instructions, curriculum theory and peace education.

Action research in education originates in the belief that there is an unhealthy gap between research and classroom practice. Researchers and teachers live in two different worlds, speaking languages that are unfamiliar to each other and seldom communicating. In the world of the researcher, educational phenomena are isolated into individual factors such as intelligence, motivation, achievement and a host of others. These are properly investigated by sampling widely, so that one can make across-the-board generalizations that will be true regardless of particular contexts. In the world of teaching, these factors do not appear as isolated phenomena, but they come together during the course of a teacher's day-to-day work. Those with whom they work are not a generalized population. They are right there in the classroom, with names, with different habits, personalities and aptitudes.

Researchers and teachers do not often talk to each other. Researchers normally speak to one another through journals

and at scholarly conferences. Teachers usually talk about their day-to-day work in school hallways, in staff meetings and over coffee in the faculty lounge.

How should we view this separation? Some have regarded the split between research and practice as being primarily a problem of communications. According to this line of thinking, it follows that we need more and better digests and summaries of research findings and that these need to be more widely disseminated to practitioners. There are many examples of these publications around.

Others have seen the perceived gap between research and practice as pointing toward a more fundamental problem of the social sciences. They argue that a social science which represents the social world in terms of discrete and unchanging factors is inappropriate. Social reality, unlike physical reality, is humanly constructed. This means that reality is interpreted and actively created. There are signs of this fundamental

rethinking in nearly every social science, and in the natural sciences as well. One sign of rethinking in education is the number of research studies which employ so-called qualitative approaches to understanding the lived experience of teachers and students.

I support this second view, but in doing so I also want to say that the realities facing educators in today's schools are more ambiguous than these theoretical arguments suggest. On a day-to-day basis teacher and researcher might safely ignore each other. But today research is helping to structure what it means to teach as it never has before. This is creating a new reality for teaching. A recent conversation I had with a junior high school department head brought home the complexity of this reality to me.

We were sitting at the back of his classroom discussing a lesson that we had just observed taught by a student teacher. We both agreed that it had been an excellent lesson. He was full of

praise for this student teacher as being "one of the best" in his 19 years' experience as a cooperating teacher. Then he said, "But I won't be taking any more student teachers." After a surprised silence, I asked, "Why not?" He replied, "Because my job is just getting too hard for me to spend time with student teachers." This admission struck me forcibly, because I knew him to have a fine reputation as a classroom teacher and cooperating teacher. But as he recounted the day-to-day pressures of his work, I began to understand. First, there were the increasing institutional expectations, to keep a closer eye on attendance, to give more attention to student evaluation and to prepare for the new provincial achievement tests. Along with these pressures have also come the new initiatives from "downtown": the effective teaching program, another program showing how instruction should be altered to accommodate different student learning styles. The final straw came with the news of a three percent cutback in education funds for the coming year and larger class sizes.

These new external pressures had come immediately to mind, but as we talked on there seemed to be something even more fundamental at stake. "You know," he said, "there was a time when I understood the background of the students in my class pretty well. They all had a mother and father at home, went to church . . . very much like me. Now there are so many differences among them. I don't know where a lot of them are coming from anymore." And then he added, "but I'm still expected to reach higher standards."

I've often reflected on this conversation over the past few months. I'm coming to believe that to be a teacher today is to be caught between one reality that cries out for active, caring persons, and another reality that is trying to meet educational needs by imposing generalized solutions on perceived problems. Effective teaching is a case in point. The program is well intentioned and the aspects of teaching effectiveness it attends to are indicators well supported by research evidence. But what does it mean to be an effective teacher in the situation being experienced by this junior high school teacher? Surely it is not something that can be determined by research evidence stripped of its original context and reapplied to his classroom. Effective teaching, good teaching (is there a difference?) is important. Indeed it is crucial. But if it is just one more thing among the many others for which the teacher is responsible during a busy schedule, how useful is an effective teaching program?

Effective teaching is only one example, among many, of the way that the conclusions of research studies are employed. It follows a familiar pattern of using the products of a general body of research literature to respond to problems, to develop policies and to implement programs, all of which end up affecting the day-to-day work of teachers. It is with this in mind that action research is proposed as an alternative. The following is a brief description of the initial project of action research and its subsequent development.

Action research, as the name suggests, is directly concerned with developing a closer relationship between theory and

practice. Originally it was introduced in 1944 by Kurt Lewin. Lewin was interested in the social psychology of group dynamics and social change. He was concerned that research typically remained in books as theories, rather than compelling social action. He held the view that, if we could join the experimental approaches of social science with contemporary social problems, then we could simultaneously contribute to the betterment of the community and to social theory.

The method of action research consisted of a spiral of planning, action and reflection (Lewin, 1946). The planning moment included analysis, fact-finding conceptualization and planning action steps on a particular problem. The action moment consisted of the execution of the plan, accompanied by a careful observation of what occurred. In the final phase, the evaluations were made on the basis of the observations. This was followed by further circles of replanning, acting and evaluation proceeding in a spiral fashion.

Reading Lewin today we are struck by his optimism that social science could be used to solve social problems. He does not seem to have seriously questioned the accuracy of conventional social science. He merely criticizes its lack of application. This has had negative consequences for action research subsequently. But in his original work there are also the three themes which continually renew action research. These three themes are: 1) improvement in people's situations, 2) improvement in the knowledge of that situation, 3) the active involvement of participants.

We might characterize the progress of action research over

the past 40 years or so as variations on these themes. As in a symphonic piece, the basic themes of action research set forth the original idea. These are followed by a series of variations which retain certain features of the original idea but which alter or disguise the others as they bring them forth in new forms. Changing views of social science have at least been partially responsible for the variations in action research.

The First Variation

Stephen Kemmis (1981, 17) notes that the idea of action research was taken up almost immediately by educators. Until the mid-1950s, and later, it enjoyed a considerable popularity. There were multiple applications: in inservice education, in evaluation and supervision and in research. But in this broad application action research began to lose its focus, becoming all things to all people.

Many educational researchers had doubts that teachers could either identify appropriate questions or had the research skills to investigate them. Hodgkinson (1957), for example, was particularly critical of the emphasis on "doing" in action research. He argued that teachers' doing figuring and calculating based on observations in their own classroom was not necessarily research. This was mostly activity for its own sake—"easy hobby games for little engineers" (153). Research, he reminded, is thinking, not the gathering of statistics.

Hodgkinson was responding to a variation in the action research theme statement that places emphasis on research methodology. But Lewin's original project also placed

importance on participation. The significance of the cooperative group was noted by Shumsky (1956) as he observed the critical need for developing feelings of "belongingness" and community in a modern individualistic society. Community building creates the conditions for critical thinking and cooperative action. "Doing" in these terms is an acting in solidarity with others to bring about changes.

These two aspects of the first variation of action research might be termed as the "weak and strong forms of action research," (Kemmis 1981, 26). But the first flowering of action research soon began to wilt as a recognized direction for social and educational research. In its weak form—as a methodology—action research did not have the same sort of scientific validity as conventional research methodologies. This may not matter much in terms of local problem-solving, but it does matter in terms of the academic legitimacy and generalizability of the research findings. So long as social science did not question the basis of its assumptions about social reality, action research would remain inferior to the methods of professional social researchers.

In its strong form action research criticized the science/engineering model of social research and practice, proposing an alternative model based upon communities of reflective practice. These researchers argued that the dissemination of research evidence by social scientists, for later application by experts with technical expertise, was an inappropriate model for bringing about social change. But this, too, failed to take root. The assumptions of the science/engineering model of

social science became more deeply entrenched as more and more funding was channelled into "basic" and "applied" social research in the late 1950s and 1960s. As the rewards increased for professionalized research, the institutional space for action research in schools and universities began to disappear.

The Second Variation

The second variation on the action research theme was introduced in Britain. There had been an early British link with Kurt Lewin through the Tavistock Institute for Human Relations. In 1970, the idea of action research in education attracted the interest of Lawrence Stenhouse, a curriculum scholar at the University of East Anglia.

What particularly interested Stenhouse and his associates was the suggestion that teachers might become researchers in their own classrooms. Their experience with the mostly unsuccessful curriculum reforms in the late 1960s and early 1970s had caused them to be skeptical of the "one way" dissemination of theoretical curriculum ideas into classroom practice. But unlike the action researchers of the previous two decades, they were not expecting to create generalized social theories. Their interest was in the development of a different order of theory, the implicit theories that underlie practice (Elliot and Adelman 1973, 20).

By breaking away from the idea that there might be a unified social science, action research was then freed to develop the original theme of teachers as researchers in fresh directions. The Centre for Applied Research in Education (CARE) at the University of East Anglia developed a number

of projects in curriculum implementation, inservice and democratic teacher evaluation. But in developing this theme new issues began to arise. Among these new issues was the ownership of the research and the ethics of disclosure. These became issues because with this form of action there was now a different relationship between the outside researcher and the classroom teacher. In previous times the relationship was one of a cooperative, but hierarchical, division of labor. The researcher lent research and theoretical expertise; the teacher tested and applied these in the classroom. With the emphasis on the interpretation of practice, this relationship became collaborative, with a democratic but more ambiguous division of labor.

The Third Variation

Concerns about the exclusive focus on the practical have led to a third variation on the themes of action research. The prospect of relying exclusively on participants' interpretations, without reference to outside validation, is problematic to critics and supporters of action research alike. Carr and Kemmis (1986, 94) note that, on one hand, the unified science (positivist) view would criticize the interpretative variation of action research for being weak on generalizability and for failing to provide objective standards of verification for the participants' own understandings. On the other hand, others might fear that the participants would be unaware of their own natural attitudes which already determine and limit their insights into "social realities."

Carr and Kemmis's own view is that an appropriate science of

education should firmly reject pretensions that there are general social science laws which may be arrived at through "objective" means independent of the interpretations of the people involved. In this sense they are in agreement with the interpretative variation of action research. However, they also point out the need to go beyond participants' understandings. They propose the development of action research as a critical educational science that is oriented towards the development of teaching as a "praxis in self-reflective communities" of educators (207).

This third variation re-emphasizes the three original themes of action research by drawing upon a social theory that is radically different from the one which originally informed Lewin and his followers 40 years earlier. In their book *Becoming Critical Through Action Research*, they closely follow the critical social theory outlined by the German social scientist Jürgen Habermas. Employing this analysis, they argue that the ideal of improving education, and the quality of social life in general, through genuine democratic participation is limited by unequal power relations. These relations have developed historically and may be altered through the action research of participants.

Supporters of critically reflective action research see it as a genuinely "educative" science of education which moves participants beyond merely solving their problems-in-view. By beginning with these, and by extending the range of analysis and reflection, they may gain new insights into their own work situations and

taken-for-granted assumptions. Moreover, by exposing the blocks to free and open communication, participants might be able to build a truly democratic collaborative practice.

Are There Future Variations?

In a perceptive and critical review of the first edition of Carr and Kemmis's book, Rex Gibson (1985) described a picture of a Salvation Army band marching down the road. At the head of the parade was drum major Jürgen Habermas, followed by Carr and Kemmis beating on two big bass drums. It's a funny picture, but it carries a serious purpose. It warns of accepting uncritically critical theory as a new outside authority for judging the validity of practice. It also implies that critical theory has not given us the last word, but that the composing of action research continues.

This monograph on action research now joins in that composition, exploring further thematic variations. Our exploration has touched upon a number of continuing tensions in the theory and practice of action research. I conclude by highlighting three of these.

The first is the continuing tension between theory and practice. The interpretative and the critical variations of action research have given a new prominence to the practical by rejecting the applied theory notion of practice. And yet action research as a theoretical construct looks oddly like an abstraction of good commonsense, hardly worth talking about. How does one represent action research without falling into the very dichotomy of theory and practice that we are attempting to overcome?

A second tension is the continuing one between action and research. How do we develop opportunities for making action research projects public? And what forms of public validation are appropriate? If we ignore this tension we will confine action research to conventional problem-solving. This risks preserving and deepening the split between research and practice. History teaches us that, when this happens, the quality of action research suffers and it eventually withers away as a legitimate research approach.

Finally, there is the tension of collaboration. Let us agree that there is already some cooperation between teachers and professional researchers and that there are intentions to do more. This is already an established marriage of

necessity and convenience. But true collaboration involves much more than this. It requires that a serious and sustained effort be made to develop understandings among educators (be they labelled teachers or researchers). It means the development of truly collegial relationships based upon an ethical responsibility for one another and for the children we serve. We have some distance to go here, overcoming the habits of self-interest which are bred in a culture of individualism.

The teachers and university people who have contributed to this monograph are mindful of these tensions, having lived them in one way or another during the course of projects. Our experience, while only a beginning, has at least allowed these tensions to come into view.

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Action Research

Teachers' Reflections

Implementing Gifted Programs: Two Beginnings

Preface

A truism in education may be that developing a new program is easier than implementing a program. The beaches of educational reform are littered with hulks of past reforms. Whenever a change is introduced to education, teachers are expected to implement it. Action research may provide a vehicle for teachers to participate in a more meaningful manner in curricular change.

The two reports which follow document the beginnings of the process of two teachers who attempted to implement a new gifted education program in their respective schools. Their reports hint at the elements of the tension in action research which are so vital to making it a viable form of educational endeavor. These reports are grounded in a technical concern about the implementation of the

program. The authors are initially interested in establishing a program delivery system that will work. Their reports are pragmatic and interpretative, demonstrating one element of the origins of action research. Both authors express frustration with the withdrawal of their school division's consultant for the gifted program. They describe what it's like to be cast adrift—expected to achieve a successful program with fewer resources.

The critically reflective element of the tension of action research does not play an essential role in these reports. Neither teacher chooses to question the pedagogical validity of the gifted program or its meaning and implications for education as a whole. The reports show practical action being the catalyst for a gradual “coming to know” the meaning

of the gifted program. For example, Joan comes to question the criteria used for selecting “gifted” students; Irene expresses frustration with traditional teacher-centred learning activities.

As the reports unfold one gets an increasing awareness that the authors move from being interpretative and concerned with technique to being critical and self-reflective. There exists in both a unity of experience which may form the basis for further theorizing, further reflection and, eventually, development of extended action research into the essential nature of the gifted program. It is for this reason that the reader ought to focus not as much on the subject of their study, but rather on the process of their “coming to know” the gifted programs in their respective life-worlds.

Irene Bocek

Irene Bocek, a teacher at A H Dakin Elementary school in Edson, sees her role of mediating the needs of the students in the gifted program with the traditional classroom situation as a complex one. The issues which arose involved student frustration with being given at times what was perceived to be extra work, as well as many other practical implementation problems. For Irene, the most important issue centres on whether or not to pull students out of the regular classroom. The reactions of teachers to this issue enrich Irene's description of her beginnings as a catalyst teacher and her coming to understand her role.

Action research is a form of research where general practitioners can consciously and systematically undertake the improvement of their own practice. It is a plan to move from a general idea to the specific and practical aspects of the innovation. One of the most important components is reflection on the success of each step in the process—a monitoring process that makes the problem manageable.

An action research plan seemed a logical approach for evaluating the implementation of a gifted program. In his book, *The Meaning of Educational Change*, Fullan states that “school district decisions to engage in particular reforms were of two types: those reflecting opportunism, in which districts were motivated primarily by the desire to reap federal funds, and those characterized by problem-solving, in which the main motivation emerged in response to locally identified needs” (Fullan 1982). Perhaps the Yellowhead School Division’s decision to implement a gifted program through all grade levels emanated from a combination of both types. Initially, an educational grant was made available but, as with most grants, it was for a limited period of 18 months. Board members voted to extend this period for a minimum of two extra years. This action, in the face of government cutbacks in education, is seen as very positive support for the initial stages of the program.

Perhaps the main motivation for the adoption of the program was the setting of goals by personnel of the Yellowhead School Division. One goal stated that all human beings are unique and that regular

classroom teachers, with the assistance of a catalyst teacher, should provide the gifted and talented child with unique learning experiences, primarily within the classroom setting. This goal may have been enunciated in response to frightening provincial data which show that a high percentage of gifted children later become high school dropouts. Somehow, our school system is failing these children. Fullan believes that projects which emerge in response to locally identified needs are more successful at achieving desired outcomes.

At the A H Dakin School in Edson, we have attempted to begin a gifted program that supports the goals of the Yellowhead School Division. The program is open to students in Grades 1, 2 and 3. As well as being primarily within the classroom setting, a program should build on students’ strengths rather than their weaknesses. Provision was made for me, as a catalyst teacher, to devote 300 minutes per week to test, organize materials, visit classrooms and see students on an individual or group basis. My first task was to provide inservice for the teachers at my school—to inform them of the goals of the gifted program and to convince them of the need to provide the program within the classroom.

Several years ago, there was a gifted program for Grade 3 students only. It was a “pull out” program. The “pull out” program was not well received in the school. Staff felt the children in this program developed a superior attitude. By being taken out of their regular classes the students missed important components of the day. Consequently, staff was pleased with the prospect of an

in-classroom approach for gifted students.

The catalyst teachers met with the school division’s coordinator of the gifted to determine ways to identify students for the program. We discussed a number of possibilities but decided to begin with children having a IQ of 120 or better. However, since the gifted materials would be used within the classroom, many children would have access to them. The activities, based on all levels of Bloom’s taxonomy, provide a wide range of thinking skills. Some aspects could be completed by all students. The higher level thinking skills of application, originality and evaluation might be mastered by only the gifted students, who might then help the less capable learners who possessed the requisite motivation and determination.

Home room teachers identified 28 students as gifted from a total of 209 in Grades 1 to 3. The previous year’s home room teachers were then requested to fill out student profile sheets and a scale of student characteristics. Letters were sent requesting parents’ permission for modification of the regular program. As well, parents were asked to fill out a questionnaire regarding skills, talents and behavior of their child.

Since our students are the potential beneficiaries of change, I felt that they should participate in the planning process as well. Students were asked to prepare a booklet reporting their hobbies, interests, learning style preferences, likes, dislikes and so on. Thus, from parents, teachers and students the catalyst teacher receives a wide cross-section of ideas and topics for each child. These sheets are

placed in the school's cumulative file for the benefit of the receiving teacher or school.

There followed an extensive search for materials to be used and many hours of making materials too. The made materials are based on: a) the interest areas of students as defined in brainstorming sessions and indicated on the forms which included their preferred learning styles, hobbies, etc and b) themes used in the regular classroom activities.

Traditional classrooms are those where students work primarily at teacher-directed tasks. Children are usually grouped according to ability, and there are generally three or four groups in each classroom. My own classroom falls into this category. Students in my gifted group were thus able to pursue a topic or topics of their choice and I made up individual program plans for them.

At first, brainstorming sessions seemed unimaginative and pedantic. I found that students played the game of suggesting only "sensible" ideas they thought I wanted. It took several sessions to generate the more creative and inventive ideas that are indicators of giftedness. It seemed that already we had harnessed the free flow of creativity. Once this group envisioned the potential scope of study I encouraged, my biggest problem was to have sufficient material on hand for them. One unexpected outcome of the gifted segment of the program was a request by groups to return temporarily to their workbooks. It appeared that the students occasionally needed the stability of the familiar.

In traditional classrooms other than my own, setting up a program proved to be more

difficult. One teacher requested worksheets that the children could do after they were finished their assignments. Although I can, and did, supply worksheets attending to each area of Bloom's taxonomy, I do not feel that provides a gifted program. It also places the child in the untenable position of completing assignments, then having to attack other worksheets. Our intent is not to punish the gifted!

Students expressed some frustration with the time allotted to them to work on their "fun" sheets. They requested they be assigned as homework but, again, this is not what a gifted program should be. Often, gifted students are expected to work independently. At the Grade 1 level, this means I must provide materials that require simple written direction, since the children possess minimal reading skills.

As I began to work with my colleagues as the gifted program catalyst teacher new problems came into view. The classroom teacher has frequently already planned centres using the higher level thinking skills. I may have suggestions for alternate activities, or perhaps I will help out in another way. For instance, I might take a group to the library and teach library science skills that will enable the student to do research work. I have helped students prepare a flannel board story presentation for a special occasion, or I have provided brainteasers and math puzzles for those who have special talent for mathematics.

Gifted students require little or no review time, less time for practice or drill and few instructions. They usually master a certain skill very quickly. For instance, addition

and subtraction facts may require very little time for some students. Testing might indicate that a child has mastered the concept. Thus, we might compact that area of the curriculum and allow the child to work in an area of his choice. Although math is an easy subject to test and compact, mastery in language arts is not quite so easy to determine. Often, teachers are reluctant to pre-test or compact the curriculum because they are afraid the child will miss important elements. As well, compacting is not successful with the gifted child who works slowly.

In my dealings with teachers, I have found that, although they initially ascribe to the basic philosophy of the gifted program, the practical aspects of application cause some problems. Time is probably the factor of most concern. Teachers generally already feel pressed for time and having gifted students brings more demands for time: time to fill out questionnaires for the gifted, time to send forms home, time to help set up and to supervise one more program, time to discuss progress with me as the catalyst teacher.

Some teachers were ambivalent about the changes I expected. They found it very difficult to eliminate certain aspects of the program, despite being able to embrace the value of the higher level thinking skills that were replacing certain workbook pages, for example.

My own preconceived ideas on implementing a gifted program have undergone some changes. It has not been as easy as I expected it to be. I felt some of the frustration the students expressed at not having sufficient time to work on their individualized program plan. At

times, I felt that a pull-out program would be superior—then I could have a group on a regular basis and thus accomplish much more.

When the district coordinator left the division at mid-term, he was not replaced. Thus our inservice meetings were cancelled. No longer did we have colleagues with whom we could discuss common problems. I discovered that one teacher in another part of our division had gone to a total pull-out program. Perhaps if we had been able to maintain collaborative contacts with other catalyst teachers, we might have found solutions to the problems of in-class programs.

Action research seems to be a very promising and practical way of innovating change within a classroom. Using Kemmis's model of identifying the initial issue, reflecting upon it, taking action and then monitoring the action helped me to focus on one major issue. There were many problems to contend with, such as the unique needs of individual teachers and different teaching styles, so it was very important to pinpoint each problem separately to make the implementation manageable.

The initial problem never seemed to be totally solved, but spiralled down (usually in the monitoring stage) to yet another unforeseen need or revised issue,

and the process started over again.

I have discovered that my initial acceptance of the desirability of an in-class program has undergone a change. The basic idea of the program's being implemented within the classroom is good. By so doing, we enable others who might be gifted but have not been identified as such to have access to the program. Gifted students will learn even more by helping others in the classroom to learn. It was perceived at the outset that identifying students as gifted sets them apart and fosters a superior attitude. Having a total in-classroom program minimizes this feeling but does not eliminate it. There are times when it is necessary to revert to a pull-out. One of my first and most successful Grade 1 pull-out sections involved the children in learning a story of Thanksgiving and then presenting it to the rest of the class on a flannel board. They learned the story and drew, painted and cut out the figures. The fact that no one else in the classroom knew about the secret added to the drama. The preparation for this presentation would have been impossible without pull-out time.

I am also presently working with all gifted groups on library skills. By its very nature, this

program requires a pull-out procedure. My hope is that the gifted children will take their new skills back to share with others. Therefore, I envision the program's running most smoothly with a combination of some flexible pull-out, but mostly in-class time.

For some teachers, and in some classrooms, an in-class program will work. In other classrooms, I am feeling some frustration. Although teachers endorse the higher-order cognitive skills, they sometimes do not implement them. Fullan states that interaction among colleagues must take place on a regular basis if there is to be a positive effect on learning conditions and outcomes. As well, he feels that teachers who do not have time for reflection and analysis are not likely to recognize or develop needed changes (Fullan 1982, 118). Preparation time is definitely a factor in classroom or curriculum innovation.

On this note, perhaps I can conclude with this issue of time. Can we primary teachers convince the Yellowhead School Division that we are in need of a monthly planning day?

Reference

Fullan, Michael. *The Meaning of Educational Change*. Toronto: OISE, 1982.

Joan Zroback

Joan Zroback describes the first year of a gifted program at the junior high level at Harry Collinge High School, Hinton. Joan outlines the attempt to introduce a gifted program during the 1986-87 school year. The program was initiated with strong support from the school board but Joan had to shift her priorities to try to stay "afloat" as the program became bogged down with practical implementation difficulties and the withdrawal of some support by the school division. Joan provides rich insight into how the structures of the educational institution can influence the role of the teacher as innovator and researcher.

On a bright, barely spring day in March 1986, as I walked through the office of our school, my principal called out to ask if I had a spare moment.

Backtracking, I found myself in his office remembering the request that I had made for "something different" to teach. His offer was exactly that. Would I consider attending a meeting, the following week, for "catalyst teachers," in gifted education? Every school needed to send someone. I decided to go.

One week later, on a Friday, the first meeting of catalyst teachers was held. It was attended by a representative from each school in the division, all wondering, as I was, what was involved in being a "catalyst teacher." We discovered that the role of the catalyst teacher had been previously defined and so had much of the terminology of gifted education. The theory was already in place.

During the spring of 1986 we had met as a group of catalyst teachers with our gifted services coordinator for one full day in each of March, April and May. I also attended the conference of the Gifted and Talented Education Council in April in Calgary. I visited a resource centre for gifted education in Calgary where I found the staff very helpful and experienced. Naively, I believed that we would be alright in our small division since programs appeared to be working well everywhere else.

I often wondered, through the final months of school that year and into the summer, what the actual in-class practical aspect of this type of education would entail. My readings led me through triads and revolving doors and individual program plans. Batteries of tests for

identification were discussed; pros and cons for pull-out programs were analyzed; parent support groups were in evidence. It all seemed so novel and exciting. I must admit that, upon returning to school in September, I was enthusiastic!

The students to be tested had been nominated in the spring by their core subject teachers. They were given parental consent forms before any testing began. Students had an option to participate. Two boys chose not to be tested. (One of the two boys had not given any of this information to his parents and I was later asked by his mother to test him.) The students with the highest scores on the CAT and the Otis-Lenin IQ tests were selected from Grades 8 and 9. Thirteen students from each grade decided to become a part of our gifted program.

The principal and I decided to keep only a small class from each grade so that I could offer a select course and not be too strapped for time. I had been given one 80-minute block per day, in both semesters, in order to work with gifted students in our school. This at first seemed like a lot of time. (As I began to work with the students and was trying not to pull them out of the same subject each time I met with them, it seemed very constrictive. The main problem was that my 80 minutes were at the same time every day, and their subjects changed minimally during that time.)

My next step was to call together the parents for an information and trouble-shooting meeting. Parents expressed concerns which I carefully noted. I explained that I felt the students needed some organizational skills. They would be taught a series of lessons focussing on the CoRT

Thinking Skills as outlined by Edward deBono. This would occur during the times when I pulled them out of their regular classes. After that I was hoping to lead the students through an independent project and to end with the class working together on a single group (or multiple groups) project, while phasing out the pull-out segment altogether.

We began with classes of 40 minutes about once a week during which we learned the basics of brainstorming, categorizing and ranking. The purpose of these exercises should have been to encourage students to think of many choices before selecting one. I found instead that the students would change their minds as many times as was conceivable within the project timetable. The topics were too unstructured for the age group; the result was that both students and I suffered from a lack of direction. I am not sure a student of any age has an easy time making a decision when insufficient structure is provided. The students had very little background with brainstorming and the Grade 9 class in particular was very shy about offering ideas.

I began to become concerned about the kind of help I was getting as a gifted program catalyst teacher. In September we had met for a half-day inservice. In October we met after school. I was in Calgary in November for the "Thinking for Teaching" Conference and again visited their resource centre. In reviewing the conference with resource centre staff I became acutely aware that I had not learned anything more concrete since the first conference. Although the centre seemed to be offering a lot of help, it was

too distant to be useful to us in Hinton. Meanwhile, in our school division, we were back at square one.

It was at about this time that our coordinator accepted another job and we were left without a director when the board decided not to replace him. At first it did not seem to make any difference but then I began to feel that I was left "holding the bag." All of the support and back-up had disintegrated and, though the division had made a conscious decision to offer the gifted program, it seemed to have no plan for its continuity and development. The teachers trying to implement the program were struggling on their own.

In February, I became discouraged. The thinking skills were wearing thin and the students (in Grade 9 especially) were becoming anxious about missing classes. I had learned how to get students started thinking. My problem, with not having a class for any core subject, was what to get them thinking about! They did not take the lessons seriously because they were not a part of the curriculum. I felt that I was failing miserably in my task and I had nowhere to turn without burdening someone else with my problem. It seemed that most of the fears and concerns expressed by parents at the early meeting were being realized.

My guilt finally led me into discussions with a few teachers who had students in the program. It was time to end the pull-out part of the program. (Although this had been my original intent I really felt I had been unsuccessful.) I asked the teachers if I could be of help in the classroom or within their curriculum. (I now feel that this

is essential in the planning stages in September in order to do away with the pull-out and identification part of the program.) This resulted in two very successful small projects.

The first, done with all students in a Grade 8 class, academically streamed, was a debate unit. I worked with the students, in groups of eight, for about five classes preparing them for a 40-minute debate. The results were very encouraging. The core teacher was impressed and would like to do the same unit next year.

The second project, with the Grade 9 language arts class, was an in-depth study of a poet. Students who were achieving very high marks in the class or showing a lot of interest (incidentally, these were not always the students originally identified as being gifted) were invited to participate. Eight students accepted the challenge and spent about eight 40-minute classes researching and producing a multi-media study to be presented to the class. The results were fantastic. One group made a video, which was extremely humorous and very appropriate (we showed it at our staff meeting that month). A second group of students interviewed the poet, as acted out by one of their number, and even performed their own background music. I attribute the success of this project to the link to the core subject and the detailed assignment plan. The students were graded by both their core subject teacher and me and the mark was averaged with a mark which they gave themselves. (The mark given by the students for their own performance was always lower than the mark given by the teachers.) Other students in the class had been given an

assignment of about the same duration so all marks were weighted the same.

Those Grade 8 students who had survived the original pull-out program seemed to enjoy very much the change of pace of the small class so we continued this until the end of May. I have to admit that we did a lot of "fun" things, including much brainstorming and even a unit on archery to wind up. They were not shy and would agree to be interested in anything! The timetabling for this grade was much more flexible, so they missed only one of their option classes each time I met with them. Also, because a different option was missed each time, they did not feel that they were falling behind too much.

The Grade 9 students were given a final report at the third reporting period and filled out an extensive evaluation form for me. These forms showed that the students needed to be graded in order to elicit a serious response from them. It also seemed to indicate that most students in this grade felt uneasy about the pull-out program. At several times during the program I had questioned them about it. However, none wanted the program terminated. Yet on the written evaluation form, all responses indicated that pull-out time should be less. Perhaps they felt they couldn't say that to me but could write it. When I tried early in the program to get students to identify their interest areas they had a very hard time deciding in what, if anything, they were interested. But on the evaluation forms most regretted that they had not been able to "choose" what they wanted to do. They seemed to want freedom of choice but, clearly, it was too broad an area

or too big a responsibility actually to make a choice.

The identification of gifted students on the basis of test competency (as initially decided by the school division) is, in my opinion, not valid. After working with these students for a year, I feel that a teacher recommendation is more valuable and more appropriate. It is very important to work with the core subject teachers to enrich the program; it is also important to include them in the selection process. I favor working with groups of students whose interest is keen at that time in that subject area for a short-term project and moving to a different group of students who are highly motivated in a different subject area. The overall identification process falls down when projects become more specific.

These identification procedures were a consensus of all the catalyst teachers who met in the spring. I personally felt that we should try them out in order to evaluate them. However, along the line, the system crumbled. No one was in charge, ultimately, and all of us were left to flounder. Because I really had no support for my cause, I shifted my emphasis from trying to find out what a "gifted" student really is to trying to stay afloat in my position as catalyst teacher. It was enough for me to know that the core subject teachers could pick out students whom they felt could benefit from enrichment; I needed to know how I could be useful in this position. I think I'm starting to find out. I feel very strongly that the role of

the catalyst teacher is mainly in working with core teachers in whatever way those teachers feel that the catalyst teacher can be most useful.

Based on my involvement in this project I would make the following concluding observations.

1. When students in a school are streamed, a lot of testing is simply not necessary. For each unit of enrichment offered, the students who would benefit most because of their interest in that subject area could be selected to work on a project by the core subject teacher. In some cases this selection would include the whole class. This leaves the door open at all times for students who may excel at some but not all subjects. In addition, this type of programming seems to include more students in total, but for a more "quality" type of enrichment. This learning could be evaluated, if only part of the class is involved, in place of the unit done by the rest of the class. If the whole class is involved, there would be no conflict whatsoever with evaluation.

2. Early in the school term, all interested staff members should be made aware of when the catalyst teacher is available and core subject teachers should be encouraged to formulate a plan for one or two units for enrichment. This could be done in a short meeting organized by the catalyst teacher. The months of September and October would then provide time for the catalyst and core teachers to do some joint planning. The units could be ready to begin in November, by which time the

teachers could organize the finer details of the lessons. I feel that the school administrator should be present at some of these meetings. When the major aspects of the program and its evaluation (not the day-to-day details) are being discussed, it would be beneficial for the administrator to attend. The administrator will usually have some very good ideas to contribute and should also be kept abreast of what new programs are being planned. I resent the situation where teachers are left on their own to develop programs when more experienced personnel could so easily help. Also, it is important from the view of board policy that an administrator assist in program evaluation.

3. Enrichment programs would probably be of most interest to experienced teachers who may not have many new classes or programs or who would simply like to try some ideas that they had been thinking about in previous years. If planning occurred early in the year, all involved could do a more adequate job and the chances of success would be improved.

4. The school division has a responsibility to this program which, I feel, it has neglected. After the loss of the coordinator position very little has been done to ensure that the teachers have adequate support or communication. Regular communication and constant evaluation are necessary to maintain a program across a division. In our school division, the position of coordinator should be re-established in some form.

Action Research

Teachers' Reflections

Developing Student Research Skills in a Computer Processing Class

Gordon Booth

Over the past six years Gordon Booth and his colleagues at Parkland Composite High School in Edson have developed a computer processing program which has provided students with a high level of technical expertise in the use of computers. Indeed, the program has gained province-wide attention for its quality. However, Gordon's concern that the students should learn to find out and apply the possibilities of the computer for themselves led to an action research project which actively involved the Grade 12 students. He reports how this project not only improved the research skills of the students (the planned change) but also led to the development of more dialogue among the students and a deeper understanding of computers. As he says, this "is only the beginning of an ongoing experiment."

Introduction and Background

The action research project described in this paper was conducted with a computer processing class. The steps in the action research cycle are very similar to the process used in the development of the computer processing program at Parkland Composite High School over the past six years.

In the initial stages of program development, little or no curriculum guidelines were available, leaving the objectives and the content of the courses up to the instructor. A considerable amount of reflection and consultation took place in the development of the initial course. Monitoring, on an informal basis, took place throughout the delivery of the first course. Evaluation of students' performance on

various units in the course was done at the end of the course. At this point, in collaboration with other members of the business education department, a number of changes were implemented. This cycle of reflecting on existing content and process, modification of course objectives, monitoring of students' reactions and performance and, finally, re-analysis of the changed curriculum has continued for the past six years.

At its present stage of development, the computer processing program is composed of three credit courses at the Grade 10 and 11 levels, followed by a five-credit course at the Grade 12 level.

The Computer Processing 10 course is an introductory course in BASIC programming. A

lecture and demonstration format is used to introduce a relatively new subject area to a student body with varying backgrounds. Emphasis is placed on problem-solving and the development of analytical thinking skills.

The Computer Processing 20 course is composed of advanced BASIC programming and the introduction of the FORTRAN language. Emphasis is again placed on problem-solving, with the initial units taught using a lecture format and the latter units covered using a written, self-paced tutorial supplemented with disk based example programs.

The Computer Processing 30 course is composed of programming in Pascal, robotics, telecommunications and electronic drafting. Prior to this

project, these units were taught using structured tutorials. This approach has been relatively successful in that it provides the content in a concise, easy-to-follow format and frees the instructor to work with those students having difficulties.

Project Proposal

The action research project was conducted with a Computer Processing 30 class composed of 11 students, all of whom had completed the prerequisite Computer Processing 10 and 20 level courses. The structured tutorials, which I had used in this course to this point, allowed students to cover a great deal of information in a relatively short period of time. The emphasis to this point had been placed on covering the maximum content in the quickest and most efficient manner.

The object of my project was to develop the research skills of the students in this class. My initial plan was to move from the tutorial approach to a more research-oriented approach to instruction. The content of the course was to remain unchanged. By providing the students with an outline of the content of the unit and asking them to research the specifics of the concepts or structures, I hoped to improve their research skills. By asking them to summarize their findings and illustrate the concepts in the unit, I hoped to improve their ability to draw information from various sources and communicate that information in a written form.

I discussed the project with the students on the first day of class and outlined the reasons for the proposed change. They were given a choice between using the tutorial approach they had experienced in the previous

course or researching the same content. Some concern was expressed about the way in which they were to be evaluated. When I suggested that they write a summary of their findings using programs they had written to illustrate the structures covered, they agreed on the research approach. I spent the remainder of the first class familiarizing the students with the basic operating procedures of the hardware and the installation and configuration of the software. This activity was followed by a discussion on the types of operations they would need to know before beginning to build programs. The students' suggestions included things like—

How do I save a program?

How do I get a directory of what is stored on the disk?

How do I obtain a printer listing of a program?

I listed each suggested operation on the blackboard. When the students ran out of suggestions, they were given the manuals supplied with the software and asked to find out how to perform the operations listed and to record their findings in their notes for future reference.

The initial list of operations suggested by the students was very thorough and they identified the procedure for accomplishing each task very quickly. My concern about this approach to instruction being time-consuming did not prove to be as great a problem as I had expected. The time taken by the students to identify and test the procedures outlined was roughly equivalent to that taken to cover the same content by the lecture method. A number of students found other operations or peculiarities related to the

software which were not identified earlier. These were quickly shared and tested by the rest of the students. When I asked them how they felt about this approach to instruction, several points were mentioned, including:

This approach lets me find what I want to find when I think of it.

This approach does not limit me to what the teacher wants me to learn. The manual for this piece of software is not very well organized. This approach allows me to make notes in a form that I will be able to use.

The general feeling after the first experience was very positive. The students interacted well with one another by sharing information and testing their discoveries on the computer. Manuals provided with the software had not been used in this way previously. Some students enjoyed looking through them identifying similarities between this programming language and the others covered in previous courses.

The next class session was spent covering the basic structure of the Pascal language using a number of disk based examples. This activity was followed by a discussion of editing programs and error correction. The procedure used in the previous class was repeated. The editing operations were listed and the students were asked to determine how to perform them. One student noted that the editor on this piece of software had more features than his word processor. That student, as well as two others, used the text editor to write reports.

The open-ended nature of the search for editing functions revealed the differences in approach which different

students bring to the subject. I noted that one group identified and tested only the procedures that I had listed during the discussion and did not see the need to go beyond that point. A second group covered the required operations quickly and spent a large amount of time exploring a number of less commonly used editing options. The latter group was composed of the students with a higher performance record.

As an initial assignment I asked the students to write a set of instructions for the start-up procedures and editing functions. They were told to assume that the instruction set was to be used by a person unfamiliar with the computer and the software. The resulting submissions left much to be desired. They were basically a copy of the brief, point form notes taken from the manual. They lacked detail and made a number of assumptions about the readers' knowledge of the hardware and software. When I returned the reports, the students were made aware of the assumptions through a role-playing activity. I took the role of an inexperienced user and asked the students to help me through the initial start-up procedures and elementary editing operations. When prompted with questions like—
 What do I do now?
 Is this screen display what I should have at this point?
 How do I know the last operation worked?
 How do I return to the main menu?—
 the students soon recognized the assumptions made in their initial summaries. A number of students made notes on the types of questions I had asked. After this role-playing activity, I asked the students to rewrite

their reports telling them that the better mark of the two would be recorded. Their reactions were mixed. The displeasure at having to rewrite an assignment was balanced by the opportunity to improve their grade. I noted a substantial improvement in the quality and detail of the assignment after the role-playing activity.

One student was bothered by the time-consuming nature of writing the report. That concern was countered by a second student who noted that the completed report would make a good reference from which to study. He went on to note that the tutorial approach did not produce such a reference.

Subsequent units dealing with programming structure were handled in a similar fashion. The due date for the assignment was negotiated a day or two after the students had started their research. They were allowed to collaborate while doing their research. A number worked in pairs for the duration of each assignment and seemed to learn well in a setting where they could discuss what was happening at each stage. This group seemed to overcome problems in program structure and syntax errors quickly. The second noticeable group included those who tried to accomplish the task on their own. When members of this group encountered problems they were reluctant to refer to their classmates and either called on me or puzzled over the problem on their own. There seemed to be no noticeable correlation between the approach students took to their assignments and their performance.

The students, for the most part, made good use of their time and set reasonable timelines for the completion of

their assignments. The democratic fashion in which the due dates were set seemed to contribute to the fact that there were no problems with overdue assignments.

When I questioned the students about their feelings three weeks into the project, they made the following comments.

I learn better when I have to find information by myself.

It is hard to tell if you are right without checking with someone else.

This is a more relaxed way of learning. There is no pressure from the teacher.

Doing the reports is very time-consuming.

Doing the reports reinforces what has been learned.

You haven't taught us anything but I've learned quite a lot.

On a number of occasions, other members of the business education department visited the class to observe the progress of the project. The questions which usually arose in subsequent discussions were: "What is the role of the teacher in this type of setting?" and "Is this approach transferable to other subject areas?"

Staff member comments concerned how well the students handled their time and the informal atmosphere in the classroom. The students were usually on task, either working in groups or individually, and this observation led to discussion about the role of the teacher in this setting. It was noted that the teacher was not the transmitter of information but the person who provided the structure for the students to learn on their own. Also discussed was the role of peer tutoring with respect to this project. It was obvious that some students picked up the information quicker than others

and we noted that some students prefer to consult their peers when they encounter difficulties.

Four weeks into the project, I reviewed the students' performance and my diary entries. My initial reaction to the project was positive. The students' response to the project was favorable and the written assignments had improved over time. The initial goal of the project was to improve the students' research skills. The first four weeks had provided them with an opportunity to practise those skills.

The question which faced me was whether or not further improvement could be made. The majority of the students were comfortable with the current approach. My plan for the remaining portion of the project was to try two modifications regarding the amount of information I provided students. Firstly, I intended to continue to give them an outline of the content but not the problem set. My hope was that they could generate relevant examples on their own to illustrate the concepts and structures covered. The second modification, to be tested later, was to present them with only a problem but not to provide an outline of the procedures required to solve it. This change would require students to answer the question: "What do I need to know in order to solve the problem?" as well as "How do these structures work?"

There were two types of response on implementation of the initial change. The first response was that some of the programs used to illustrate the structures were slight modifications of those used as examples in the reference texts.

The second response was a request from several students for program suggestions. The programs used in the students' assignments varied considerably. My not dictating the problems to be used allowed the brighter students to show their creativity, while others were faced with another problem which required my assistance to overcome. The differing viewpoints of the students became clear to me during this activity. Some looked upon the programming language as a tool to be used to solve everyday problems, while others regarded it as a problem unto itself and did not visualize where it could be applied. This finding raises the questions: "How do we get students of the latter type to see the applications of their work without providing practical problems?" and "Does the setting of specific problems stifle those who can see practical applications for what they are learning?"

The second modification of the plan involved providing the students with a problem but not an outline of the concepts and structures needed to solve it. The problem I gave the class was one which required students to produce a bar graph for a given set of data. Graphics is an area of computer study that students find interesting and it was obvious that those who had a computer system at home or who had done work on graphics in previous courses knew what to look for. Others needed prompting with questions like—How do you draw a line from one point to another? How do you fill an area with a specific color? How do you mix text and graphics?

My verbal prompting amounted to providing them with the same information they

received on the formal outline. This exercise underlined the point that, even though almost all the students came through the same prerequisite courses, there is a very wide range in their background. The informal use of computer technology at home provides knowledge which is easily transferable to the school setting. To accurately test this approach to instruction would require using a concept new to the entire class.

At the end of the eighth week of the project the class was tested using a previous year's examination. The results were roughly equivalent to those obtained by the previous class.

The students were asked to complete a short questionnaire at the same time. I asked them to identify the advantages and disadvantages of the approach taken, their preferences with respect to method of course delivery, and whether they would like to continue with this method for the rest of the course.

The replies received were positive. A number of students said that the experience "allowed the learner to make their own discoveries and use their own knowledge rather than that of the tutors" and "made me think more and learn better." Other students commented that the approach was "a lot more challenging" and that it "helps you to remember more." Noted as advantages were the facts that students could work at their own pace and that "you get more attention from the teacher."

A disadvantage mentioned dealt with students' self-discipline. "Students may not use the time to their advantage." Comments were also made about the sense of uncertainty created by an open-

ended approach. "It is hard sometimes to find out what to do." "If you make a mistake and don't realize it, you could end up making the same mistake in your later programs."

When I asked which approach (lecture, tutorial or research) was preferred, the majority indicated preference for the approach used during this project. Some students qualified their answers with comments like "research with the teacher's assistance" and "research with a little more lecture for direction."

The questionnaire responses seemed to indicate that the approach was well received by the majority of students. This, along with the fact that the quality of the assignments submitted improved over time, shows that the research approach is a viable alternative to instruction in this course. The criticisms expressed by some students about the lack of lecture or direction should not be overlooked. This approach highlighted the individual differences of the class members. The ability to cope with an open-ended search for information varies greatly in any group of students. In this approach the instructor must be aware of these differences and be prepared to assist those students who need more structure or direction.

Conclusions

The intended result of a research project is to determine whether the experiment has been a success or to establish some relationship between the elements at play in the situation being observed.

The first question to be asked is whether the goal of the project has been attained. In the short period of time over which this project was conducted, students' skills at finding and synthesizing information improved. The project's long-term goal was to help develop skills on which the students' could build. The success of this goal cannot be measured now, but feedback from the students in a year's time will be an indicator of whether it was achieved.

A number of anticipated problems in the project did not materialize. The shift in the role of the instructor from a provider of information to a provider of problems might, it was initially thought, increase the pressure on students. The additional stress because of uncertainty as to what was expected of them was noted by a few students but the majority took the change in their stride and performed well.

The perception that this approach might be more time-consuming proved to be false. Some students actually picked up the information quicker on

their own than they would have in a more traditional setting. A number of responses on the questionnaire indicated that, as well as covering the module in the same amount of time, the students felt they could learn the information "in their own way" and record it in a fashion that made sense to them. Given the various learning styles of individuals in any class, the challenge to the instructor is to assist each student to do this. This approach lends itself to matching the individual learning styles of individual students.

The cyclical or spiral nature of the action research model, matched with the differing learning styles of individuals, lead to the conclusion that the project initiated two months ago is only the beginning of an ongoing experiment. The findings of the initial cycle were determined by the individuals in the given class. These findings can be used as a starting point for the next group of students in this course but there is no guarantee that the end results will be the same. Adaptations must be made on an ongoing basis to accommodate the individuals in the class. The monitoring and critical reflection components of the action research model permit the quick recognition and correction of problem situations.

Action Research

Teachers' Reflections

The Question of Collaboration

Hans Smits

Hans Smits is a junior high school social studies teacher on leave from the Edmonton Public School District to complete a master's degree in secondary education at the University of Alberta. He explores the question of collaboration from the stance of a teacher with a strong commitment to the profession "enjoying a year off to soak up some theory." As a part of his research, Hans worked with Irene and Gordon on the action research projects described in the two previous articles. In reflecting upon this experience he reveals the various tensions that underscore the process of collaboration between "outside experts" and teacher researchers. Emphasizing the highly variable nature of the action projects and of the situations and settings that give meaning to respective teacher researchers, Hans teases out a variety of questions for collaboration. These range from practical considerations of limited time to questions concerning the shaping of a collaborative research community.

Sometimes educators forget to recognize that no one gets from one side of the street to the other without crossing it! No one reaches the other side by starting from the same side. One can only reach the other side by starting from the opposite side. The level of my present knowledge is the other side to my students. I have to begin from the opposite side, that of my students. My knowledge is my reality, not theirs. (Freire 1985)

While Freire is discussing the relationship between teacher and student, his conception struck me as being relevant to the question of collaboration in action research. How can we cross the divide separating theory from practice and university research from school concerns? The projects in which

I was privileged to be involved during the past year offered an opportunity to consider collaboration from the perspective of this question. Through collaborative effort, questions were raised about how we may begin to view research in practice as a valid and crucial form of educational research.

The experience of being an "outside" collaborator made me reflect on the meaning of collaboration. I have attempted a "dialogue" between my understanding of some of the theoretical aspects of collaboration and the interpretation of my experience in university classes. This is a dialogue between the idea of collaboration and the experience

of collaboration. From my conversations with two teachers engaged in action research projects, several "tensions" emerged as we considered the question of collaboration. The term "tension" suggests openness to different possibilities or "solutions" depending on the situation; collaboration, then, may be seen as a kind of tension.

Working Concerns: The Tension of the How, the What and the Who

What the literature says:

Consideration of the meaning of collaboration raises the question of the integrity of action research. As Tripp warns, the greatest threat to that integrity

is for outside collaborators “to use merely the technical form as a means of engineering professional teacher development” (Tripp 1984). Carr and Kemmis do not discount the role of outsiders but do consider it problematic because the traditional educational community has tended to reflect the gap between theory and practice and the interests, roles, responsibilities and power implicit in that gap.

The literature recounts experiences with collaborative action research which exhibit the problems with collaboration that Carr and Kemmis, Tripp and others would alert us to. Some writers note that the interests of researchers from outside the schools may be inconsistent with the more practical goals of the teachers. Often, traditional perceptions of roles and status of university researchers and school teachers seem to create difficulties in establishing collaboration (Oakes et al 1985; Smulyan 1983, 1984). Other writers reach fairly pessimistic conclusions regarding the possibilities for equitable forms of collaboration, noting the problems of time, work and administrative constraints in schools (Roweton and Wright 1985; Norris and Sanger 1984).

It is interesting, though, that in some of these accounts there is also a realization that the meanings of collaboration and action research cannot be taken for granted. Participants may have different interpretations of what is involved. Thus one meaning of collaboration in practice is, to come to an understanding of diverse meanings (Smulyan 1984). Questions of how the research is to be done, what is to be done and who is to do it perhaps need

to be preceded with opening such questions for discussion, uncovering various meanings and interpretations people hold about the process, their positions, expectations and so forth.

What my experience says:

The projects with which I was involved were initiated and controlled by the teachers in the schools at all times.

Nonetheless, the fact that the projects were an aspect of the teachers’ participation in a graduate university class made the independence of those projects somewhat problematic. The course established a form of outside control, which I felt made my position ambiguous; in a sense, expectations were built in which were not entirely of the participants’ making. Initially, it seemed difficult to build a common ground for discussion and for establishing what form the collaboration could take. What would we talk about at our first meeting? Should I ask to sit in on Gordon’s computer processing class? (As it turned out, he invited me to sit in!) What should be done with our conversations? Ought I, as an outside collaborator, learn more about giftedness or computer processing? These were just a few of the questions that related to the problem of initiation of collaboration.

My initial interest in the action research projects was in the process itself and not necessarily the actual content of the changes of the projects in which I was collaborating—Gordon’s computer processing project and Irene’s gifted program. When I initially began conversations with Gordon and Irene I felt a little frustrated—I felt “pulled into” their specific

concerns. The “what” of our discussions was not the moments of action research or the plan or the monitoring, but rather what the nature of giftedness might be, what problem-solving entailed, how one could teach with certain concepts in mind and so on. Thus, as an outside collaborator, I had to enter into the world of meaning, the lived experience of each teacher’s situation, in order to understand “what” was being researched.

Reflections:

Partly at least, the tension I experienced in establishing a working relationship grew out of my desire to influence the outcome, if not of the action research projects of Gordon and Irene, certainly of my own project, which was to build an understanding of collaboration. Perhaps from more practical perspectives, Gordon and Irene saw the need for different kinds of collaboration. For example, it may have been more beneficial for them to have worked with a collaborator who was more directly knowledgeable and interested in the actual content of their action research. The practice of my collaboration had still been remote from that. On the other hand, the distancing on my part minimized perhaps the possibility of outside control and allowed more reflection in a general sense to occur.

In the experience of my collaboration there was still a gap, due in part to the various working concerns which required critical reflection and action in themselves. But the concern should be more than just a practical concern about collaboration. Just focusing on action research and collaboration as technical problems to be solved may

obscure the deeper questions of the meaning of research, what it is for, and whether action research can respect and join persons of different interests. Also raised is the question of whether these issues can be resolved through the application of rules about collaboration learned from research in other situations or whether the very notion of collaboration requires careful examination and thought in each context.

Theory-Practice Relationship: The Tension of Means and Ends

What the literature says:

Action research recognizes the problem of a gap between theory and practice. Argyris and others note that the term "practical" is ambiguous in usage today—it has a utilitarian sense, in terms of the linear means-end conception of action (Argyris et al 1985). Likewise, Gadamer (1984) thinks that practice has been devalued by thinking of it in terms of the application of theory, turning practice into a technique. Many writers, including Carr and Kemmis, see in action research the possibility of recovering the Greek notion of practice as praxis, which is an inherently moral concept, being concerned with both ends and means, where practice is guided, not by theoretical knowledge, but by practical reasoning and knowledge with a disposition to act justly. The Greek term that describes this kind of reasoning is "phronesis."

This notion of praxis speaks to the question of knowing what education is, knowing what it means to be an educator, understanding education as an inherently practical activity with its own practical theory, guided by intrinsically educational values. Praxis is

unlike instrumental reasoning which has the logic of "techne": to influence action with theoretical knowledge (Carr and Kemmis 1986). The question of collaboration asks, therefore, whether outside collaborators can be oriented to both the action in teaching and teachers' understandings of their own practices. This implies that the practice of collaboration requires "thoughtfulness," with an orientation to the unique, lived experience of the classroom or school (van Manen 1984).

What my experience says:

The tension between the idea of collaboration and the experience of collaboration is reflected in the relationship between theory and practice, as I experienced it in the Edson projects (Gordon and Irene). My understanding of Gordon's project, for example, was that he wanted to introduce a more flexible problem-solving approach in his computer processing class. The impetus for the change came from his own understandings and experiences and involved an examination of his own theories about teaching, such as the relative importance of content and process and how individual students learned. These theories were opened to question through his own action in the classroom and not by the application of theoretical knowledge.

In that situation, what could I as the outside collaborator bring? From a practical point of view it became necessary for me to enter into the praxis in which Gordon, and Irene in her project, were engaged. In the experience of our collaboration it seemed to be important for Gordon and Irene to discuss their theories as reflected in their practices and for me to understand those practices in terms of the ideas

set out in the action research plans, in the context of their respective situations and their overall philosophy of teaching.

Reflections:

What was perhaps required from me as the outside collaborator was to work as a participant in the research and be willing to let go of my theoretical interest—the idea of collaboration—and my practical interest—to influence the practice of collaboration. In other words, my praxis could have been conceived as entering into the lived experience of Gordon's and Irene's situations, attempting to understand their theories, as well as developing both the idea and practice of collaboration, but collaboratively!

How does the notion of praxis speak to the question of collaboration? Can collaboration itself be seen as a praxis? As a praxis, collaboration confronts us with the question of why we should collaborate. The notion of praxis has a normative imperative. What is that shared interest or purpose? Does the outside collaborator bring theory to change the practice of the teacher? Is it the teacher's interest only to change a practice? Or do collaborators meet to learn about each other's theories and practices? As Carr and Kemmis suggest, "action research is collaborative when groups of practitioners jointly participate in studying their own individual praxis."

Epistemological Questions: The Tension of What Knowledge Counts

What the literature says:

The question of what knowledge counts is in part related to the issue of praxis, which suggests

that we need to attend to the practical knowledge of teachers and others involved in the action research. Outside researchers need to respect the situatedness of educational problems and practices and not to see research as “context stripping” (Mishler 1979).

Argyris (1985) writes, “Like sentences in a particular language, actions make sense in a particular community of practice.” Can collaboration contribute to this task of producing knowledge that is both situational and has the possibility of changing practices in schools? Carr and Kemmis (1986) consider that objectified and generalized forms of knowledge are inadequate for understanding educational problems and practical actions, which are situated and particular in nature. In this respect collaboration suggests a different stance of outside researchers to knowledge interests. It cannot be a disinterested one or a relation of subject to object. Perhaps the relation of outside researcher and school practitioner may be conceived of as subjects who stand side by side, in co-presence, oriented to understanding and improving educational practice and discovering meaning (Scudder and Mickunas 1985). The validity of such knowledge, derived in practice, can only be determined by a “community of interpreters” (Bernstein 1986).

What my experience says:

I walked into my collaborative experience with limited knowledge of action research. My intention nevertheless to influence a pattern of collaboration quickly lost its impetus in conversations with Gordon and Irene who were

more than tolerant of my arrogance. In our conversations we discussed theories and concepts which had a direct impact on the practice of the teachers involved. For example, in Irene’s project we discussed the relative merits of in-class as opposed to pull-out gifted programs. Irene also shared with me some of the materials she had developed that could be used by classroom teachers with gifted children. As an outside researcher, an aspect of my collaborative experience was learning from and about specific teaching experiences and forms of knowledge imbedded in practical, pedagogical interests.

But we also discussed educational issues from a much broader perspective—much of our discussion revolved around notions of what good education might be and how this education related to the interests of students. In the conversations, there always seemed to be this movement between particular instances and more universal ideas of good education.

Reflections:

Although my collaborative experience was very educational and productive, my position as a collaborator always felt somewhat ambiguous. On the one hand, I am a classroom teacher, with a strong orientation to that vocation, but also I had been enjoying a year off at university, soaking up some theory. Partly, I was feeling ambiguous about what knowledge really counts.

Perhaps for a university researcher the epistemological question is more problematic. What is the nature of knowledge that is produced collaboratively in action research? Ought it to be made public? Is there a question of truth that can be

explored in collaboration? Does the outside researcher have any responsibility to bring new or different understandings to bear on the situation? In these questions there is a notion that collaboration points a way in which educational research can become more educational. The collaborative relationship is also an educational one, in the sense of education as a leading out and moving beyond, a responsibility of all the participants in a collaborative project.

Reflection: The Tension of the Why

What the literature says:

In one of his many eloquent turns of phrase, Freire (1985) writes:

Whether it be a raindrop (a raindrop that was about to fall but froze, giving birth to a beautiful icicle), be it a bird that sings, a bus that runs, a violent person in the street, be it a sentence in the newspaper, a political speech, a lover’s rejection, be it anything, we must adopt a critical view, that of the person who questions, who doubts, who investigates, and who wants to illuminate the very life we live.

A potentially distinguishing feature of action research from both “normal” research and “normal” classroom practice is systematic (and some would say critical) reflection on knowledge and experience. Many writers on action research, like Ebbut (1985), would agree with Freire that educational practice ought to be imbued with reflection. Reflection would mean the ability to see one’s self, as teacher, as both an active thinker and doer, as a subject in control of the situation. Carr and Kemmis (1986) also consider critical reflection, whereby the

teacher becomes more aware of wider issues, as an essential component of action research.

The possibility for systematic reflection appears to be enhanced through collaboration by helping to structure observations, discover themes and discuss plans and observations. Perhaps collaboration may help to uncover knowledge and meanings that may be largely tacit, to uncover that which we are not necessarily aware of. According to theorists who stress the interpretative nature of human endeavors like education, understanding is enhanced through communication; in other words, through conversation individuals may become more reflective about their own situations (Bernstein 1983).

To become more aware of the tacit nature of practical knowledge or theory and to be able to see that theory in action is, in a sense, to have a conversation with the situation (Argyris 1985). Ricouer (1979) also considers that action can be a text for interpretation and conversation, a conception that also points to the importance of writing and sharing interpretation collaboratively. The idea and practice of conversation in collaboration is intriguing as a way of promoting reflection. Argyris (1985) proposes that "this reflective talk provides another window into practical reasoning."

What my experience says:

When I read over our "reflections" in the form of written transcripts based on my conversations with Gordon and Irene, there is a much more active connotation than the

word "reflection" sometimes suggests. What we discussed, the way we framed our observations in language, was not necessarily what we actually observed. The written transcripts of our conversations were particularly interesting in that way: a text was provided in which we could interpret our theories, which seemed a different order of interpretation from the original oral conversation when we theorized about our practice. Tentatively, in our conversations, we entered an "hermeneutical circle": moving back and forth between particular instances and more universal notions, attempting to understand and interpret, trying to answer the why. That this could evolve in a fairly short period of time is a promising indicator of the value of conversation—dialogue. However, the time factor and other considerations worked against the participants taking a more critical stance in these conversations.

Reflections:

My feeling is that this question of reflection in practice needs much greater reflection. For example, is reflective action different from an evaluative model of action, where we judge action on the basis only of its outcomes? Is reflection itself a form of action? Does Freire's idea of dialogue suggest an appropriate model for collaboration in action research? Promisingly, our work with journals and transcripts point to conversation and interpretation as modes of reflection. If this project had extended for a longer time, I suspect that the sharing in conversations and writings would have deepened.

**The Idea of Community:
The Tension of Dialogue**

What the literature says:

Kuhn's concept of paradigms suggests that scientists of a particular persuasion have institutional support in a community of researchers. As teachers and university scholars we can probably talk about being part of an educational community, but is it one that will close the gap between theory and practice, doing and knowing, and research and action? Existing roles and traditions in education may work against the realization of genuine action research. Can we develop a language that is one of practical interest, but with an enlightened view of change and its possibilities? Collaboration is central to this question.

Carr and Kemmis discuss the difficulty of an action researcher working along, particularly in terms of promoting reflection and maintaining integrity in the research process. Gerald Pine (1984) suggests in a paper on collaborative action research that an action research group may provide a system within a system to encourage change in a school. From a more general perspective, collaboration in action research promises a way of building a "community of interpreters" (Bernstein 1986) whereby "truth" in education can be discovered through dialogue and practice.

What my experience says:

The experiences of the two Ed CI classes in Edmonton and Edson provided a glimpse, I believe, of how an action research community might function. To be honest, there was not enough time to develop deeper levels of communication. Nevertheless, as an outside

collaborator, I eagerly anticipated and enjoyed my conversations with the teachers in the Edson projects. As well, I thought the classes in Edmonton and Edson were unique in terms of providing forums, not only for theoretical discussion, but also for discussion of the projects from more practical perspectives.

Reflections:

Collaborative action research provides at least a way to begin thinking about what an educational research community oriented to practical concerns might be like. Paramount in such a conception is the need to provide a forum for discussion, conversation and support. Would an ideal mix be teachers and university researchers? Are more formal structures necessary to promote and nurture the possibilities inherent in action research? Is it possible to build genuinely collaborative communities in situations often dominated by bureaucratic and hierarchical structures and demands?

In trying to develop a practice of collaboration, we may heed Gadamer's (1984) words when he tells us that "practice has to do with others and co-determines the communal concerns by its doing; . . . practice is conducting oneself and acting in solidarity. Solidarity, however, is the decisive condition and basis of all social reason." The notion of community as a basis for research describes what is essentially human in our enterprise, the concern for others and, in our case, the shared and yet-to-be-discovered meanings of education.

Loose Ends: The Tension of Other Tensions

This paper relates some reflections on my experience with both the theory of collaborative action research and my experience as an outside collaborator in two action research projects. I have tried to portray those two experiences as a dialogue indicating some of the tensions that exist between collaboration as an idea and as an experience.

I have omitted other issues that deserve attention. For example, there is the question of whether students (and also parents) could be involved actively in school and classroom action research projects as collaborators.

Also, I have not discussed the ethical dimension of action research, especially from the perspective of responsibility and consequences of increasing awareness and reflection.

It is difficult to draw conclusions about my experiences with action research in this past year except to state that we need to learn a great deal more. Perhaps the value of action research is that we become more open to questions, questions which point to something shared between us as teachers and university researchers.

Our attempts to understand and improve education are powerful incentives to continue asking questions about collaboration in action research.

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Action Research

Teachers' Reflections

Implementing Word Processing in an English Classroom

Ted Paszek

Ted Paszek, on leave from the Edmonton Separate School District, is completing a master's degree in secondary education. He began his examination of computer use in senior high English as "a self-appointed cynic and critic of technology in schools." Ted is concerned that students and teachers of Archbishop MacDonald High School should be part of a collaborative research process. His discussion extends beyond concern with the innovation itself (namely, the computer) to exploration of the possibility of action research providing an opportunity for collaboration among teachers in conjunction with outside experts. In every sense, Ted sees action research as a process that should be owned by the teachers as researchers.

As a teacher in the humanities, I have been concerned about the incursion of the computer into our lives. I have watched its introduction into business, math and science courses. I sense the worries of teachers that the computer will turn our students into unthinking robots, that too much dependency on computers will cause certain human functions to atrophy, that the machine will make humans superfluous and at the same time destroy thinking and creativity.

We realize, on the other hand, that computers are a fact of life. At the moment, computer power is power in the hands of a computer literate elite. As responsible teachers we cannot ignore this. If we wish to empower our students to have some control over the future, we

must enable them to use, direct and decide about the computer.

So my interest in computers started as that of a self-appointed cynic and critic, who felt that these machines could not be ignored. As it happened, when the high school in which I was working decided to purchase computers, I volunteered to head the committee to investigate the hardware as well as the software that was available. I did not want to leave all the decision-making in the hands of the business and math people.

The ways in which the computer can be effectively used in education are still largely undefined. As an English teacher, always on the lookout for methods of improving student writing, I see one possibility in utilization of the computer's word processing

capabilities. Word processing gives us control since we interact with the machine in much the same way that we interact with pen and paper or with the typewriter.

Most teachers of writing agree that there are three stages in the writing process: pre-writing, the act of composition and revision. Care must be taken not to see these stages as linear. Often they are all going on at once but, for our purposes, it is useful to separate them.

Beginning writers are most often resistant to doing revision because of the tedium of rewriting and recopying. Yet this is a very important step. It is in the revision step that a writer will be rethinking and clarifying ideas, as well as considering how effectively the ideas are being communicated.

Can the computer remove some of the tedium in revision and encourage students to revise more?

There is research support for the use of the word processor in the teaching of writing, but the problem of implementation faces the individual teacher. What to do and how to get started? This problem of implementation interested me as a graduate student in curriculum. Will implementation of innovations be more effective if the teacher becomes the researcher? Can the teacher conduct research on the effect of an implementation in his own classroom?

Action research is a possible approach. This project was designed with the four moments of action research described by Kemmis and McTaggart (1982) in mind. Their *Action Research Planner* puts it this way—

To do action research one undertakes—

- to develop a *plan* of action to improve what is already happening,
- to *act* to implement the plan,
- to *observe* the effects of the action in the context in which it occurs,
- to *reflect* on these effects as a basis for further planning, subsequent action and so on, through a succession of cycles.

This report is written mainly as part of the reflection upon what transpired. The purpose is to provide a basis to proceed to further action.

The Context

We implemented the use of the Appleworks word processor into two English 10 classrooms at Archbishop MacDonald High School with the purpose of improving writing. As we proceeded various questions were in our minds. What happens when word processing is introduced into the writing

process? What is the effect of the word processor on the writing of high school students, in particular, on the act of revision? What are the problems in logistics and what are the feelings and attitudes of students and teachers toward the word processor in an English classroom? Can action research provide both a means for implementing computers into an English classroom and also gaining knowledge about computers and writing?

One of the two classes was a matriculation English 10 class with 16 students; the other was an honors English 10 class with 32 students. Prior to implementation a few students were already using the word processor for essay writing. In fact, over half of the students in both groups were either able to type or use the word processor. Although it was never stated, the expectation was that all the students would produce their written work for English on the computer.

Archbishop MacDonald is a special Edmonton Separate school; it offers an honors program and the international baccalaureate program as well as a regular matriculation program. The school has a history of innovation and change in that the honors program was developed by the staff and the baccalaureate program was recently introduced. The school has also developed a unique career exploration program. Much discussion of gifted programs and learning styles and other educational issues has been a matter of course at staff meetings.

The Plan

I approached two colleagues, Wayne and John, to participate in this project. Wayne is the

English department head; John has been teaching English for a number of years (although he is also a music and drama teacher). Wayne acknowledged that he has always been interested in improving the revision process in writing. John had a different interest; he felt it was time he “got with it” in becoming more familiar with the computer. We had the full support and cooperation of the principal as well as the two computer processing teachers.

Because of my background with computers, I began with instruction in the use of the Appleworks word processing program. Once this was done, I was to become the outside collaborator. Wayne had some familiarity with the word processor. John had less experience. We hoped that they would develop enough expertise with the word processor to provide assistance to students as necessary. Being conscious of the pressure of time on teachers, I hoped that extra work for them would be kept to a minimum and that Wayne and John would be able to keep some notes, observations and reflections on what happened.

This project was a collaborative effort and the activities were discussed every step of the way. Collaboration is an important aspect of action research. The ownership of the research belonged equally with the teachers and me, the outside collaborator. I searched out the literature on computers and writing and provided some of this to the teachers. We discussed what was happening on a number of occasions and the planning was a joint effort.

Sometimes I had the feeling that the teachers were trying too much to accommodate me, even though I assured them that

I would fit into their schedule. On the other hand, I think that, as an outside collaborator, I provided the impetus for the project to continue and I was able to devote the time for the writing at various stages of the project. My role was to participate in the planning of the project and to keep a journal, to instruct the classes on the use of the word processor, observe some classes, interview some students, interview the teachers, provide what expertise I could, write up the proposal, negotiate with administration and other staff when necessary and supply what literature we might need on action research and word processing in English. I would also write up the final report.

Putting the Plan into Action

I visited with the principal and gained his approval for the project before I discussed the finer details with Wayne and John. There are two computer labs at Archbishop MacDonald. The downstairs computer lab was available during John's class but it was necessary to negotiate access to that lab for Wayne's class because the typing teacher was scheduled to conduct a typing class there. Fortunately, the upstairs lab was available and, since a new semester was starting, the teacher offered to take her typing class upstairs. The downstairs lab was more convenient for the English classes because of proximity to the regular English classrooms and the library. Wayne arranged for the purchase of disks and computer paper. With the help of the computer processing teacher, we prepared program disks and data disks for student use. For my part, I supplied some literature on

action research and word processing.

I visited both classes on a number of occasions to instruct them in the use of the word processor. Because of the unavailability of the lab, in my first session with the honors class I used a lecture and demonstration approach which I do not think was particularly successful. It is much better to work with "hands on" right from the start, which I did with the other class.

Early in the development of the project, Wayne came up with the idea of placing on disk a sentence revision exercise that has been available in print in the English department. In this way, students would be practising their word processing skills at the same time as they worked with sentence revision. The particular revision exercise used dealt with problems of style. Wayne typed in the exercise which was then transferred to each student's disk. The students worked on this exercise for several class periods. The same procedure was followed in John's class.

The next activity planned, again at Wayne's suggestion, was to have students transfer an in-class handwritten essay to the computer and to use this as a draft for revision. Could the students strengthen a paper composed in one class period by taking some time and using the power of the word processor? We saved the originals on disk and then renamed and saved subsequent drafts. We also printed final drafts. We used the same activity in John's class as well. These activities took several classes to complete.

During this time the two teachers and I were available to assist students either with the mechanics of the word processor

or the revision task. We also continued to monitor the progress of the students by observations, by reviewing what they had on disk, by checking and assessing their final drafts and by discussions between the teachers and myself. Normally, I would talk with Wayne or John after a classroom activity. We did not meet as a threesome because of the time schedule. This might have been useful had it been possible.

At the end of this sequence of activity, we spent a whole class period with each of the groups talking about computers and writing. We taped these sessions. I also taped a discussion with Wayne alone to get his reflections on computers and writing in light of our action research project. Unfortunately, I was unable to tape a session with John's class because the recorder did not work. Nevertheless, I was able to note some of the comments from this class and later they provided us with some written reactions. I transcribed or summarized these conversations which I provided to the two teachers. At this stage I started writing up the project while the teachers continued on their own.

Observations on the Project

Although some students in the matriculation class composed at the keyboard, most of them were more comfortable with pen and paper for their first draft. As one student reported, "Most of the time I use paper first, then transfer it to the computer to be printed." Many thought the word processor was useful as a revision tool. One student noted that, "When I am finished an essay and I read it over I just have to move the cursor around and correct the mistakes that I missed before I print it out. When

I do it on paper I have to re-copy it or use liquid paper or something and make a big mess.”

Several students were concerned about having a choice. They wanted the freedom to decide whether or not to use the computer. “I’d rather have the choice either to type an assignment into the computer or write it out myself.” One student observed that typing skills were really important to the level of comfort with the computer. Some felt pressure in that others were proficient and knowledgeable in the use of the computer and they were not; they were concerned that they were being left behind and were at a disadvantage.

Students generally felt that computer skills were important and foresaw that students now in lower grades would acquire those skills before entering high school. They would sense the same comfort with the computer that most of us feel with pen and paper. We are at that in-between stage: more comfortable with pen and paper but having to adjust to the computer.

When students were asked what they might do in the future, most said that they expected to continue to do a rough draft on paper and subsequent drafts on computer. One indicated that she would prefer to do the whole process the old way because her typing skills were weak and she did not think she would ever be comfortable with the computer.

A couple of students found the sentence revision exercise too long and repetitive. The exercise consisted of ten sections each dealing with a particular problem in style and each having ten sentences to revise. Several students did not care too much for transferring the in-class essay to the computer.

They felt that reworking a completed assignment was a waste of time. Others were stymied by not knowing what to revise.

Observations made by students in the honors class were similar to observations from the matriculation class. Honors class students generally favored the use of word processing in their writing for English but only at later stages. Most preferred to do the first draft on paper and only later enter it into the computer for the purpose of revision and printing. Here are some of the taped comments from students supporting computer use.

It only takes a few seconds to make changes on the computer. You don’t have to rewrite the whole thing.

I think about it more when I am writing at the computer.

The computer is more enjoyable. When you don’t like something it is easy to delete.

The computer provides legible work.

You can brainstorm on the computer. Just type your ideas in without worrying about mechanics. You can organize later.

Computers will free us. Enable us to do things we could not do otherwise.

It is easy to learn to use the computer. At the beginning of the year I could not use the computer; now I can.

Many of the students liked the fact that the computer produced neat copy and that it was easy to delete, move and change text without having to recopy the whole. The students also had many cautions about word processing and writing. Here are some of the points made by students in the taped session.

A big disadvantage—After I had finished typing the whole document, I lost it and had to do it all over again.

But when you delete something it is gone. On paper if you cross it out you can still see it.

On paper you can see the whole essay in front of you; on the computer you can only see one screen at a time.

Better software can overcome a lot of the problems mentioned—for example, deletions can be remembered.

This computer has memory limitations. There was no warning that the memory was full until too late.

A person needs to become really comfortable with the computer to use it effectively.

At the moment it is inconvenient to get access to the computer. Pen and paper is available all the time.

Computers are sort of cold. I am more comfortable writing by myself, in my room.

Students should be taught typing and computing skills at a younger age. Some day students who come to Grade 10 will be proficient on the computer and be more comfortable than we are.

My computer at home is different than the one at school and I cannot transfer my files. I can only do my work at one place or the other.

Some people capture their ideas faster with the computer, others with pen and paper. Depends on their typing skills.

Both teachers involved viewed the word processor as a tool having some value. They see that value particularly in aiding the revision process. Both observed that the computer makes it easier for students to correct errors and to make changes without the necessity of recopying. From the teacher’s point of view, it was easier to read and evaluate papers.

Wayne confirmed the belief that it is especially important to teach the writing process and that the computer may assist but in no way can replace this step. He found that some

students revised the in-class essay to the point where the original was better than the final draft; they were revising for the sake of revising. John was convinced that there must be freedom of choice. Students must be able to choose the writing medium with which they are most comfortable. Both teachers felt strongly about the need for easy access to the machines and for students to acquire keyboarding skills.

Reflections on the Project

The three of us believe that this project was successful. We may not have discovered anything particularly new or important to announce to the world, but we have a better understanding of the problems and needs of our writing students. We are thinking about writing and computers. We are looking for better ways of teaching writing. We have a basis for further investigation. We know that the computer does not replace teaching of the writing process. We also know that there are problems of access to computers. A number of practical questions are raised, too. When and where should students acquire keyboarding skills? Should word processing be taught somewhere else so that time is not taken away from an already heavy curriculum? Should students be required to produce documents in print? Are there programs in addition to word processing which can help in the teaching of writing? Do students write differently and do they write more at the computer than with pen and paper?

From my point of view, the collaborative relationship between me and the teachers was very comfortable and relaxed. I did fairly extensive reading in action research and

computers in English, but I was careful to supply a limited amount of this material, particularly on action research, to Wayne and John, because I was conscious of the time constraints they faced. As it was, they were very generous with their time to talk to me about the project.

Reflections on Action Research

At first glance, action research seems to be what every practitioner does as part of normal practice. To some extent this is true, but to do action research means to plan, act, observe and reflect more carefully and rigorously than one does in everyday life. The goal is to gain knowledge as well as to improve practice.

Collaboration with others is an important aspect of action research. If possible, an outside (university) collaborator is ideal because that individual has time and opportunity to review the literature and supply pertinent readings to the practitioners. The outside researcher can provide the impetus and motivation to continue the research. Otherwise, the temptation, in face of the pressures on teachers' time, is to forego or defer the research. It is also required that someone other than the busy teacher be observing, providing a sounding board and, especially, doing the writing. However, care must be taken that the outside collaborator does not impose too much. Power must be equally shared among collaborators.

I wonder about how much theoretical background a teacher needs to engage in action research and how a teacher should acquire such a background. In the implementation of change, does

the teacher become an expert in the change by reading and researching and inservice and then enter the classroom ready to implement it? Or can the teacher initiate change with basic knowledge or even just an idea that evolves as he moves through consecutive action research spirals? In the latter case, outside expertise is sought when necessary, but the change is gradual and incremental and the teacher has full ownership of it. There are two levels of implementation: one level is the action research, the other is the specific change intended.

The term "action research" is "off-putting" and tends to mystify. The term and some of the principles stated by Carr and Kemmis (1986) and others, like so much educational theory, seem so distant from the world of the classroom. I don't like the term but I cannot think of a better one. I also worry about the bandwagon effect—action research is suddenly an approach everyone is talking about. Sometimes a good idea is destroyed when it becomes a slogan.

There is generally little interest when I approach teachers with the idea of action research. Of course, teachers are continually being confronted with yet another new approach—pursuit of excellence, effective teaching, critical thinking, learning styles and, now, action research. However, there are elements of action research (I will continue to use the term for now) which I find appealing. Imagine the possibility of classroom teachers investigating their own practice with the hope of improving it or teachers writing for other teachers about what they are doing or what they have discovered. Especially

interesting to me is the possibility of collaborative work. Currently there is so little exchange among teachers about what is going on in their classrooms.

This kind of research can have a direct and immediate effect on student learning in the classroom. With all its complexity and "messiness" the classroom is the locale of research. Action research can be democratic, free of the heavy hand of administration, free of distant theory, belonging to teachers and their students.

What motivation is there for a teacher to engage in action research, particularly the formal writing part of it? Teachers want to improve their practice, but there has to be

recognition beyond that for the effort. As a student in the masters program at the university having a genuine interest in improving personal teaching practice, I was strongly motivated by the satisfaction of a degree and possible publication. Teachers need similar recognition. As a profession, we might push for university credit for teacher researchers, higher income, consideration for promotion, opportunities for publication and time to do the work. But, that's an issue for another paper.

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Action Research

Teachers' Reflections

Understanding a Consultant's Role

Val Olekshy

Val Olekshy, a physical education consultant with the Edmonton Public School District, brings up a very important question about consulting. Being a subject area consultant can be a large and undefined job. Val considers "what consulting is" as she works through the implementation of the new secondary education physical education program. She finds that action research is a way to get beyond the traditional models of curriculum implementation.

One of the most difficult aspects of a consultant's role is providing services to a wide variety of individuals within one school district. These include both administrators and teachers who work in different settings and who have varying degrees of experience. Influencing curriculum change at a district level is all encompassing because one is faced with all of these variables. The most critical variable is knowing whether the change occurred and whether the type of assistance provided was that which is most effective.

Action research seemed to be an interesting way to get a better understanding of the consultant's role and, at the same time, commence district-wide implementation of a new physical education curriculum. By going through the action research spiral of planning, acting, observing and reflecting while providing assistance to teachers implementing the curriculum change, I hoped

that I could gain deeper insight into consulting.

The Context

For many years secondary physical education teachers in Alberta have been teaching without a current curriculum guide. The last guide was printed in 1967. In 1983, the Department of Education set up a committee to write a new guide. The guide was piloted during the 1984/85 school year. In the meantime, the secondary education review took place necessitating further changes to the guide. The revised guide was field tested by the Department of Education in the first five months of 1987.

The new physical education program tries to develop a much broader range of skills, knowledge and attitudes than the former one. Major emphasis is placed on the development of physical skills and understandings. The content is organized around seven dimensions of activities:

aquatics, dance, fitness, games, gymnastics, individual activities and outdoor pursuits. To assist teachers with their planning, each dimension is broken down into levels.

A second important part of the context is the administrative organization of the Edmonton Public School District. The district's model of decision-making is decentralized; most decision-making takes place at the school level. Consultants are responsible for providing advice, assistance and leadership to the schools and district.

Planning the Implementation of the New Curriculum

I had been interested in the problem of curriculum implementation for some time. As part of a university graduate course, I had read Michael Fullan's book, *The Meaning of Educational Change*. Fullan emphasized the importance of focussing on materials, strategies and teachers' beliefs. He noted that implementation

was actually a “mutual adaptation” between existing practice and the new curriculum. Other writers have noted the need for regular communication with, and the active involvement of, teachers.

During the 1985/86 school year I initiated a number of activities to help teachers become aware of the new curriculum. Teacher awareness grew, but I felt that the communication had been too much one-way—from our office to schools.

When the opportunity came along to field test the curriculum guide that had been revised following the release of *Review of Secondary Program*, I ensured that as many teachers as possible from our district could be involved. I thought that our existing programs were already of high quality. The best assistance that we could provide from central office would be to use the guide as an occasion for schools to reflect upon their current physical education program offerings and to participate in suggesting their own improvements, which could be done through the field test.

The Action Research Plan

My idea was to work with 27 of the secondary physical education teachers in the Edmonton Public School District to plan the implementation of the new program. I was assisted by Dr Andrea Borys of the department of secondary education and Professor Nancy Melnychuk of the department of physical education and sports studies at the University of Alberta. The idea was for them to help with the planning and for the three of us to meet periodically to reflect on how I was working with the teachers. We would

follow the action research spiral of planning, acting, observing and reflecting.

In the past, I had followed something similar to the action research spiral as part of my everyday work. But apart from periodic self-reflection, I did not engage in systematic planning, acting, observing and reflecting with any other collaborators (as I have done with this project). Although feedback from teachers is very beneficial and essential to the role I play, they do not have the time really to analyze what I do. In fact, it was evident that many teachers did not know the role of a district consultant.

The plan was for Andrea, Nancy and I to meet together after each district or education department workshop on the new curriculum guide. As well, Andrea and Nancy would obtain observations from teachers during school visitations. I also kept a journal of my own observations during this period.

Observations on the Action Research Experience

Because the action research process is both cyclical and reflective, it is difficult to report it in a linear fashion. The following is a brief account attempting to describe one isolated part of the action, depicting the components of planning, acting, observing and reflecting.

Planning. January 26. Planned agenda for the first district teacher inservice meeting. The main concern in the plan was “How can we involve the teachers in an authentic dialogue about physical education in general, as well as the new curriculum in particular?”

Acting. February 2. As consultant, I led the inservice

session, informed teachers about the new program and fielded questions. Andrea and Nancy, my two collaborators, worked as facilitators with discussion groups of teachers engaged in dialogue about the program.

Observing. Nancy and Andrea recorded impressions of my actions and interactions in their journals. I did the same.

Reflecting. February 10. The three of us met to share and reflect. We noted that the dialogue among the teachers went well. However, there was a need to enhance their understanding of the skills level approach. Also teachers needed an opportunity to discuss together how to accommodate individual differences, as well as how to use the guide for their own lesson and unit planning.

The second cycle proceeded as follows.

Planning. March 3. The three of us met to discuss the consultant’s role in helping teachers with curriculum implementation. We discussed the next inservice session (March 9). We considered how to handle some of the teachers’ specific concerns. We also discussed ways of clarifying the levels approach for teachers. On March 8 we discussed ways of monitoring inservice techniques which I employ.

Acting. March 9. In the role of consultant, I led the inservice and provided information about the new curriculum. Andrea and Nancy acted as group facilitators.

Observing. Nancy and Andrea recorded impressions of my actions and interactions in their journals. I did the same.

Reflecting. March 17 and 18. We noticed that teachers were beginning to share their thoughts more openly with one another. There seemed to be a

greater understanding of the practical application of the skills levels approach.

Reflections on the Action Research

The action research did provide an opportunity for teachers to be more involved than in previous inservice sessions. Not only did they attend workshops on the curriculum, but also they helped me to develop future plans for district-wide implementation with other physical educators and administrators. This was important in assisting me in my role as well as in giving an opportunity for teachers to provide leadership.

For me as a consultant, the biggest help was the collaborative aspect of the action research process. In education we often work in isolation and formal reflection may only occur during performance appraisals. The systematic nature of action research required that I begin to question my thoughts and actions consistently. This made self-reflection a habit. I have now become better aware of my beliefs and actions as a consultant and what these mean to me and to those I serve.

Follow-up

Plans are now being made to strengthen the links made among the teachers who participated in this initial project and to extend the project to new schools. Some of the ideas include arranging "buddy schools," peer consulting and submitting newsletter articles. These programs will be highlighted and shared throughout the year as teachers work through curriculum implementation. These activities will supplement the usual workshops and administrator awareness sessions.

I see the action research project this year as the beginning of an ongoing process. It was a fruitful learning experience which gave me the opportunity to work reflectively with many dedicated educators for the benefit of their students.

The Kantor communication scheme and the Fullan model of curriculum implementation were useful in developing an understanding of the change process. Action research was helpful in going beyond these models and reflecting on the meaning of change itself within the realities of the schools and classrooms of our district.

Reflection

My understanding of the consultative work I do comes from self-reflection, collaborators' meetings and teacher comments. Primarily my role is to assist teachers with implementation in their classrooms and I am seen as a facilitator and communications link. One teacher described my role as a "clearinghouse of information," another as "the influencer." I am not responsible for district implementation but am responsible for providing teachers with advice and assistance with curricular change. Reconfirmed for me as well was the fact that teachers are the experts on all curricular change that is to be implemented in their classrooms and this expertise must be shared with others. My role in facilitating their opportunity to share with other educators will continue to grow and strengthen the professional spirit I saw develop in our district with this process.

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Action Research

Teachers' Reflections

Action Research in Democratic Decision-Making

J-C Couture

J-C Couture is a teacher and the student union adviser at Harry Collinge High School in Hinton. In this project he examines the possibility of arriving at an "authentic democratic" resolution to the question of a smoking ban in the school. The objective was to have the students become a critically reflective community in search of a solution whereby all students would gain from a smoking ban. As we discover, a truly democratic resolution of the issue became problematic because of the failure of J-C and the Student Union to understand the true nature of the school as a collection of communities. This throws into doubt the viability of "authentic democracy" not only in our educational institutions but also in society at large.

Throughout the fall and winter of the 1986-87 school year, as the Student Union adviser at our school, I had the opportunity to develop an action research project focussing on the question: "How can a restriction on smoking at the school be introduced?" The issue for Student Council members was not whether to call for a ban; it was simply one of how to introduce a ban or some restriction.

For several years the designated smoking area in the school was a room which the Student Union came to see as an excellent location for a student lounge. Since space in the school was at a premium, it seemed to the Student Union that perhaps the smoking room would have to go.

After months of discussion with both students and teachers and following a survey which

showed that 72 percent of students would support a ban if a lounge area were opened up, the Student Union finally achieved a resolution to the issue. Because members of the teaching staff opposed a ban (since it would increase supervision problems, for example), the Student Union failed to get any strong support from the teaching staff for a ban on smoking in the designated area indoors.

Following a desperate meeting with students who used the smoking area, a compromise was worked out: a shelter would be installed in an indoor courtyard area so that the smokers would move outside.

Within two months of this meeting (which took place in late March), the board of trustees of Yellowhead School Division had voted to ban smoking in school buildings,

effective the following January 1.

This vote followed consultation with school administrators, teachers and student representatives, including members of the Harry Collinge Student Union. In effect, the Student Union had come to the same policy resolution as the school board. The major difference was that they participated in an attempt to arrive at a decision using the principles of authentic democratic decision-making within the confines of one school.

As the following summary of the action research project shows, the students were able to practise a "maieutic style" of decision-making (Cox 1986, 37). For this I am happy—a communal process of conflict resolution was possible within the community of students.

What was distressing was the inability of both the community of students and the community of teachers to act as one.

What this summary reveals is a basic reality: a truly authentic democracy is not possible in a group that is in fact not a community in the sense that Gadamer would use the term. My awakening to this basic realization is what this discussion is really all about. More than anything, action research allowed me to see what had been hidden, to peel away the rhetorical dialogue that both students and teachers were using in order to come to understand one another and to arrive at a sense of authentic human action.

For the sake of brevity and coherence I have chosen to provide only a summary of the report prepared following completion of the study. I have summarized each of the integral steps of the action project but have eliminated most of the narrative describing events that took place (for example, meetings between teachers and students, informal discussions).

Most of the text that follows is in the present tense, revealing events as I viewed them as my writing of the report proceeded.

Identifying the General Idea (A Personal Divestment)

What the smoking question poses to me is an opportunity to heighten our sense of community. From my perspective, lecturing students on the dangers associated with smoking can have only limited effect since the predominant capitalist forces generating the consumption of cigarettes are far greater than current public sector resources directed at stopping the habit. Imposition of

a ban on smoking may have the desired effect but at a real cost to the school or institution that tries to counteract the overpowering images young smoking teens (especially females) have come to associate with cigarette consumption. The cigarette manufacturer, as any capitalist, sees the product as a means to an end (profit), and the advertising agencies that stimulate demand for the product attempt to picture the human body as the product of commodities.

The tremendous productive force of capitalist expansion has absorbed the human territory (the body) and transformed it into "the hyper-real, and the infinite simulacrum, the abstract, compulsive innovation of signs: arbitrary but perpetual, empty but brilliant" (Faurschou 1987, 72).

John Oldland, now a business professor at Bishop's University, who has worked for the tobacco companies on advertising campaigns, puts the issue into clear focus. "Young smokers are a valuable marketing commodity because non-smokers at the age of 20 are likely to remain that way . . . You can attract them early and then you may well have a loyal customer" (*Globe and Mail*, January 21, 1987).

Dr Richard Kennedy, president of the Alberta Medical Association, clearly agrees that the targeting of young people is the key to the future viability of the tobacco industry. He writes: "They're trying to increase their market share against each other . . . and who's more impressionable than young people" (*Edmonton Journal*, January 27, 1987, A8).

While 350,000 Canadians quit smoking each year, smoking is increasing among the female

teen population—largely, one could expect, because of the success of advertising campaigns that play on the images of glamour and "body beautiful" so prevalent in current ad campaigns. That cigarette smoking kills 32,000 people a year in Canada has not deterred the growth of the habit among the younger members of the Canadian population—in 1983, 40 percent of Canadian women aged 20 to 24 smoked, by 1985, the figure had climbed to 51 percent.

A survey of "mortality" in Australia shows that in 1980, 19 percent of all deaths were related to drug use. Of this number 79 percent were caused by tobacco use, 18 percent by alcohol and only 3 percent by other drugs (WHO 1984). This study showed that someone who starts smoking before age 14 is fifteen times as likely to develop lung cancer as is a non-smoker.

What this situation reveals is a breakdown in the community's ability to understand and control the productive and consumptive forces that drive the post-modern industrial society. While politicians wax eloquently on the need to declare war on "drugs" (translation: hashish derivatives, cocaine, heroin), their rhetorical posturing distracts the community's attention from the consequences of a consumptive habit that is responsible for most drug-related deaths.

Open and free communication about the smoking issue is distorted and clouded by rhetorical language of "rights" and the contractual liberalism that permeates western democracies. What is necessary for this action project is a legitimate student action program focussed on the community within the school

and the interests of that community.

So despite the temptation to impose a ban on smoking, a school would be much better advised, I feel, to avoid the alienating and destructive consequences of a divisive debate dominated by false consciousness and illusory bourgeois discussion of value conflicts between individual freedom and group welfare.

A general plan of action to be pursued in this action project follows [Figure 1]. This plan, as will be explained in subsequent sections, represents an attempt to open up the action research project to the participants. The Student Union members (with myself as their adviser) will participate in the dialogical teasing-out of a plan of action.

Reconnaissance

Harry Collinge High School has 650 students enrolled in the 1986/87 school year, 350 in junior high and 300 in senior high. A community relying on primary resource extractive industries, Hinton's population is dependent on the local pulp mill and three coal mines bordering the community. For the community of 8,000, the high school has represented a singularly important arena for the schooling and socialization of the town's teenage population.

In this context of school policy of providing an indoor smoking area for students, one could expect a ban on smoking in schools, now being imposed by large school jurisdictions across the province, to have potential to become a significant issue. Of special importance is the provincial and national trend to restrict cigarette smoking. This movement has been paralleled

in the educational system. Lakeland School Division was the first in Alberta to introduce a system-wide smoking ban. Both Calgary Public and Edmonton Public school systems recently introduced similar bans. From Toronto to Vancouver "smoke-free" schools are being mandated.

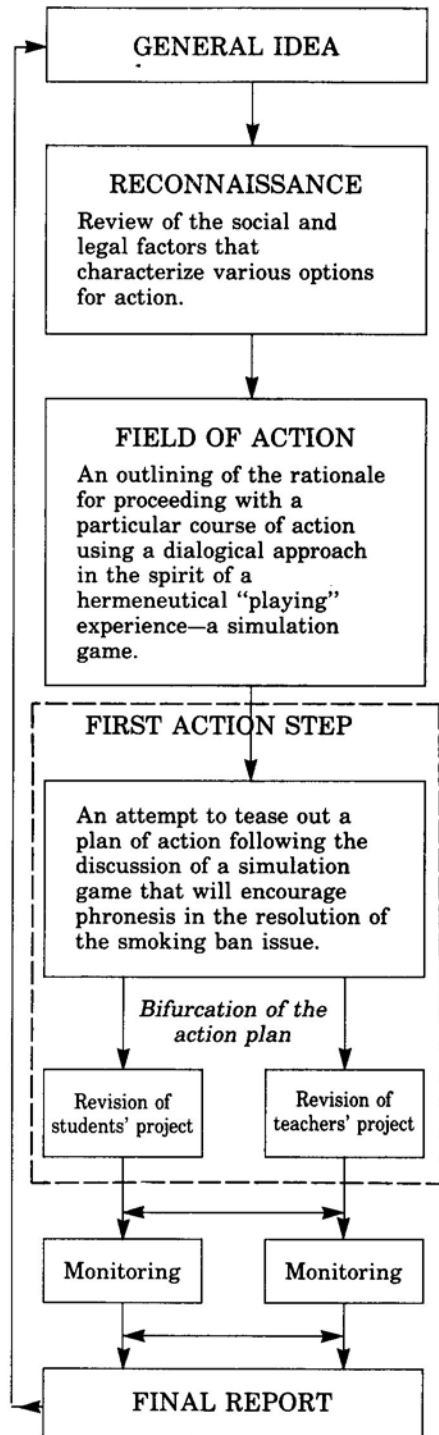
The Field of Action

For myself and members of the Student Union the real issue is not the simplistic bourgeois conflict between individual freedom and the welfare and health of the student body. It is the question of praxis—how to act in a feasible and correct manner in relation to the shared values of the community. For Gadamer, a shared or common *nomos* is a requirement for preserving and maintaining *phronesis* (open dialogue where "practical deliberations demonstrate judgment regarding someone else's practical deliberations") (Gadamer 1981, 133).

It is clear that for the Student Union an action plan must be devised that is consistent with a "win-win" scenario; otherwise conflict will result. For myself, the field of action is a public high school that I assume to be a community in Gadamer's sense of the word. Am I right to think this? Is this in fact a community? Is a meaningful praxis possible? Is it possible to develop and maintain *phronesis*?

I had used at times in the past a simulation game called Barter to demonstrate how it is sometimes counter-productive to view negotiation as "getting what you can from the other." I saw it the game as appropriate for this situation. It gives rewards to groups depending on whether group members enter

Figure 1.
A Modified Action Plan



(Adapted from Kemmis and McTaggart)

“X” or a “Y” on a slip of paper. The stated goal of the game is to “win all you can for your group.” What is important is that all groups can win if they select the same letter. Groups seldom do so, however, since there are greater rewards for entering a letter no one else chooses. (The problem is no group knows which is the “right” letter since the reward schedule changes depending on the combinations of letters selected among the groups.) I will not describe the game in detail in this summary; suffice it to say that it demonstrates that a mutually beneficial negotiated settlement can be reached when groups realize their mutual interests. Gray Cox clearly illustrates how the community can maintain its sense of phronesis by pursuing “principled negotiation.” This approach provides two important prescriptions: “focus” . . . on interests not position and “invent” options for mutual gain (144).

It was obvious after the students played the game that we all had a lot to learn from the concept of principled negotiations and the maieutic style. The game clearly demonstrated that assuming that personal gain can be achieved only at the expense of others is a completely dysfunctional paradigm for resolving conflict peacefully and equitably. The students made a number of statements that demonstrated that we had developed a phronesis and the “habit of deliberating well” in Gadamer’s sense. “We all have a common interest in shutting down the smoking room,” remarked one student. “Only by getting everyone to realize that everyone will gain [if the smoking room is closed] can this

thing work,” another student pointed out.

What the Barter game accomplished was a teasing-out of the field of action for both myself and the students. The game helped to develop a shared acceptance of a strategy for implementing the closure of the smoking room within the context of a communally shared set of principles and values (the *nomos*). The game showed on a metaphorical level how phronesis can quickly be destroyed; it allowed us to analogize the experience we would soon have within the larger community of the school. Through the interpretation of the experience of the game, we came to see the nature of ourselves.

What was the true nature of this reality? According to Alan Wolfe, North Americans find themselves caught in the paradigm of “inauthentic democracy” (1986). Wolfe describes the essence of political life in the west as being essentially narcissistic—each member of the body politic seeking personal gain. Wolfe argues that this search for rational self-interest prevents the development of truly “authentic democracy” where the interests of all can be arrived at. It was now time for the students, having become aware of some of the contradictions in their social and political situations, to develop a plan of action that might point the way toward an “authentic democracy.”

Only through discussion of the game in relation to the issue of the smoking room did we come to a better understanding of what our first steps should be. It was agreed to undertake a comprehensive survey of students at the end of January

1987. This survey would attempt to determine the degree of support for the closure of the smoking area. It would explore as well the nature and extent of the smoking habit among students. The next step was to present the results to the teaching staff in an attempt to discuss possible problems, for example, supervision and various alternatives.

It was agreed that the smoking room would be closed only with almost unanimous support from students and staff. Student Union members, after participating in the Barter game, felt strongly that everyone should come out feeling he or she had gained something. For me, this seemed consistent with the spirit of action research as well as with Gadamer’s call for a recognition of the dialogical nature of our lives as members of a community. We must fuse through dialogue and meaningful praxis a sense of our problematic situations and attempt to come to terms with them. Cox suggested a way through the maieutic style of negotiation. The Barter game analogized this style for the students.

In terms of the action research paradigm, the field of action is clear to me. In every sense what the students and I are coming to know is essentially one and the same thing. As human actors we are participating in different projects (for students—the smoking room issue; for me—action research), but essentially we are collaborating, each exchanging the reality of the other. This was especially obvious when I concluded the meeting by handing out Fullan’s list of ten essential principles for bringing about change. Although we had different

projects (the diagram in Figure 1 illustrates the bifurcated nature of our human action programs), both I and the students were involved in a common ethical and technical program. Fullan's principles (1982, 91-2) governed the first action step and the subsequent steps.

1. Assume the goal may be changed or modified as you proceed.
2. Each individual affected by a change needs to work out what it means to that individual.
3. Conflict and disagreement are a part of a process of coming to terms with a change.
4. Give people a chance to react and respond, to form their own interpretation of the change.
5. Take time, allow time.
6. Rejection and failure may occur for reasons not related to factors you might think.
7. Not everyone will accept the change.
8. Plan for contingencies, factors that may influence acceptance.
9. Our knowledge (especially of contingencies) is limited—accept uncertainty.
10. Expect frustration, but do begin implementation at least.

Observations of Action Steps

The first action step was the student survey (which, as noted earlier in this article, showed 72 percent support for closing the smoking room if a lounge could be provided in the area). The Student Union developed a plan for meetings with students and teachers (to take place in February and March) in an attempt to achieve a compromise where "everyone gains" and at its meeting on January 14 committed itself to a "win-win" scenario. Actions subsequent to that meeting were—

1. January 22-24—Survey of student body conducted
2. February 11—Survey discussed at Student Union meeting
3. February 18—Student Union/Staff meeting

4. February 25—Student Union meeting
5. March 2 to 6—Informal discussions with administration
6. March 18—Staff meeting
7. March 20—Student Union meeting with delegation
8. March 25—Student Union meeting with delegation

Final resolution achieved

It is not possible in the space available to describe these events—many of them heated discussions among the Student Union, students and teachers. Neither would it be fair to my colleagues to comment publicly on remarks made by individuals on this issue. What is more important is to provide a general summary of the events that transpired. This has been done in the introduction to this article. Suffice it to say that things did not go well when the Student Union attempted to get support for a smoking ban from the teachers. Given that it was the official policy of the school division to permit smoking (or to allow the decision to be made by each school), the staff felt that the Student Union initiative was inappropriate and/or misdirected. Despite numerous compromises on both sides, it was impossible to achieve staff endorsement of a ban on smoking in the building.

On March 25 when the Student Union met with representatives of the students who frequented the smoking room, it was tentatively agreed that the smoking area would be closed down if an outdoor shelter was built for the smokers. It was also agreed that the teachers ought to retain the right to smoke in the staff room (a merely symbolic gesture since the students knew they had no jurisdiction in this regard). It is worth noting that one of the key criticisms of a ban on smoking

was that the Student Union had no jurisdiction over the staff.

The Student Union ratified the decision to move student smoking outside and the representatives of the students left satisfied that they would have a shelter constructed. Except for the lack of support from the teaching staff, an agreement had been reached. For the students in our school the decision of the Yellowhead School Division to ban smoking from its buildings beginning in January was largely superfluous; they had agreed to the ban already (but for a different reason—to open up valuable space for a student lounge).

Reflections on Action Research

The initiator of an action research project ought not to be concerned whether or not the originally intended plan was successfully implemented. In order to develop a healthy tradition of phronesis within the educational community, it is more important to determine how effectively goals and policies have been modified to meet emerging requirements. Action research requires a healthy respect for the dialogical nature of human action. As the project proceeded I came to realize that, although the project displayed a bifurcated nature, I shared in the interpretative processes of the students and the teachers involved.

It is important that my participation in the project was not that of an objective observer—I was in the project. At times, I was observing as much as the students were. I felt ethically bound to their task, to their toil and to their frustration. These frustrations reveal what is most instructive

about the nature of action research, about human collaboration and about the limitations on phronesis in an educational institution.

I was naive to expect that the teaching staff would support a student-initiated ban on smoking. That 72 percent of students favored a ban was irrelevant to the staff since they fundamentally saw themselves as a distinct community. The Student Union failed to achieve teacher support for a ban simply because principled negotiation using a maieutic style cannot work unless the individuals involved see themselves as members of a common community. Why should teachers support a student ban on smoking if it meant they would have to stop as well? There was little common interest between the two groups.

The mistake was a profound one—the Barter game may have analogized a human project (namely, negotiating) but it was incorrect to apply the dialogue and understanding that followed the playing of the game to the school at large. The school is not a community, not at least in the sense that Gadamer would see it. Indeed, the final resolution was one which involved the community of students and their unique nomos. In reaching the solution themselves, the students demonstrated once again the fusion of praxis and understanding “their relations to one another”, and how these relations are “crucially determinative of who each is” (Cox 1986, 37). How could I be so naive as to anticipate the full participation of the teaching staff in a dialogical exchange with the students; theirs is a

community unto itself, outside the life-world and nomos of the student body.

As for action research and the implementation of innovation, I found this project most instructive in one sense. There seems to be one basic requirement: actively coming to know others through phronesis, through practising a maieutic style or through whatever means one chooses to preserve “open” communication. Yet such communication cannot take place in a society lacking fundamental consensus on values. The tension between acting morally and expediently can never be dealt with unless this dilemma is resolved. Have we as educational researchers and action planners actually discussed the only really important question? What then constitutes truly authentic human action? Being human means not to lose sight of where we would like to be, rather than being satisfied with where we find ourselves. If I have learned anything from my participation as an action researcher, it is that I know where I have been and I therefore have a clearer idea of where I would prefer to go.

In an address given at the University of San Francisco in November 1986, Christopher Lasch pointed the way when he called for a new conception of political action that probably could apply equally well to all human action in general.

Clearly, we need a conception of politics that is neither communitarian nor individualistic, a conception best described as fraternal. Fraternity recognizes the boundary between the self and others . . . a politics based on

fraternity is the only thing that makes a common life possible, because it creates the possibility of trust. The circumstances of our collective insecurity in the world make it necessary for us to trust those who cannot be subjected to our control, treated as instruments of our will, or brought into perfect agreement with our own views and purposes (Lasch 1987, 20).

Truly authentic human action is desirable; this is the goal we must strive for as action researchers. But first, we must identify those conditions that inhibit this authenticity. The observations made in this report will perhaps contribute in a small way to helping this identification. The process must continue and action research provides one vehicle for its continuation.

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Action Research

Teachers' Reflections

A Superintendent's Personal Perspective

Klaus Puhlmann

Klaus Puhlmann, superintendent of schools in Yellowhead School Division, believes that action research can assist teachers in their ongoing development as professionals. He notes that action research involves the interrelated stages of planning, acting, observing and reflecting; teachers who use this process identify a source of improvement and knowledge. Action research can enhance collegiality and mutual support and can help in the transformation of teaching practice.

In our school systems today administrators and teachers commit considerable time to instructional improvement, program implementation and improving the monitoring process. The various articles in this monograph attest to that fact. Of course, the nature of teaching and administration has changed significantly over the years, with the above mentioned activities having become a legitimate part of administrators' and teachers' daily professional lives.

As an example, today's emphasis on instructional supervision or teacher evaluation has presented teachers with new challenges as they try to address the recommendations of their supervisors within the context of their teaching. We know that the classroom, the school, even the school system, are living organisms that will undergo change without invoking it. Of course, neither the pace nor the direction that this change might

take are adequate or acceptable. Leaders in education are expected to design change in a pro-active way rather than reacting to it. They are expected to implement the best and most up-to-date theory into practice and they are expected to plan with vision.

The practical realities of life within the classroom, the school or the school system are that change is often legislated or mandated from a higher level. This is not always good, but neither is it necessarily bad. If attempts at change are to be successful, individuals and groups must find meaning concerning what should change as well as how to go about making changes.

Action research provides teachers and administrators with a powerful process to bring about improvement and change in their classrooms, schools or school systems. It provides a way of thinking systematically about what happens in the classroom, school or school

system, describes which appropriate action step to take first, monitors and evaluates the effects of the action, leads to reflection on the action and results in the development of a revised plan that begins a new cycle involving the same series of activities.

At first glance it appears that every teacher and administrator is doing action research already. This is true only to a degree. Action research demands that the four interrelated stages of planning, acting, observing and reflecting are carried out more carefully, systematically and rigorously than they are done in everyday life; such research demands to use the relationship between these stages in the process as a source of both improvement and knowledge.

It appears that all too often teachers and administrators focus on any one of these stages in isolation, paying little attention to their important interrelationships. The success of action research also depends

significantly on the degree of collaboration among the four stages and others affected by the action. This requires deliberate communication and consultation with many people such as other teachers, parents, school administration, students, central office staff and other agencies. Not only would the result be improvement in what the teacher, school or school system does, but also everyone's understanding of what the teacher, school or school system does would increase significantly.

Let us consider an example at the school level—teacher evaluation. While teacher evaluation is supposedly intended to aim at improving a teacher's effectiveness, the reality seems to be not entirely in line with this noble aim. Invariably, the supervisor identifies the teacher's strengths and weaknesses but the focus primarily appears to be on the latter. The teacher receives a report which spells out the weaknesses, accompanied with appropriate recommendations and expectations; in the end the teacher is left to his own resources to make appropriate corrections. Given this reality, I consider the action research model as a powerful process in which teachers can engage to improve their own effectiveness.

The phenomenon of teacher evaluation and the notion of teacher effectiveness seem to be driven primarily by external forces, supporting the prevailing notion that improvement is a matter of installing innovations. Action research, in contrast, rests upon the notion that improving the teacher's effectiveness will occur when the process is established as part of the teacher's regular educational life. It means that

instead of installing innovations we need to develop the teacher's capability to innovate. The net effect of this approach is that the teacher, the school or school system become self-renewing. Improvement becomes a way of life.

When one views the improvement of the teacher's effectiveness in the action research cycle, there is clearly a shift of responsibility for deciding on courses of action in the direction of those affected by the planned change. Action research provides the teacher with a flexible approach to self-improvement through action and reflection within the context of action in the teacher's classroom.

If the evaluator had described the teacher's classroom as unproductive, the action research cycle could begin by defining the problem as follows. "I intend to make my lessons more interesting with a view to increasing the student's time on task." This statement clearly recognizes the teacher's awareness of the problem, it serves as the basis for thinking about some action, it assumes that improvement can be monitored and it envisages an evolution of understanding in concert with improved practice.

Theory and practice clearly come together in action research, allowing the teacher at all times to reflect upon the relationship of theory and practice within a practical setting. Following the reflection stage, the teacher would then enter a new cycle using a revised research action plan.

As was stated earlier, action research requires deliberate communication and consultation with many people. In order to achieve this, teachers must rise beyond their cellular existence.

There is a need for openness with people (even the supervisor who wrote the report) wanting to know and understand the theory surrounding the problem; there is a kind of curiosity; there is, simply put, a professional attitude. The need for the participants in the process to talk about the idea-in-action cannot be over-emphasized. Engaging in discourse in order to articulate plans and reflect on the effects of strategic action must be an ongoing process.

Kemmis and McTaggart (1982) strongly suggest that for teachers engaged in action research, communication with others affected (other teachers, parents and students) is essential for a number of reasons.

- It encourages the development of the rationale for the practice under investigation and for others related to it.

- It helps to allow the enquiry to be seen as a "project" rather than as a personal and introspective process.

- It helps to clarify unforeseen consequences and ramifications of the work.

- It makes defining the issues easier because explaining the project to others demands clarifying one's own thinking.

- It helps to get moral support and to see the limits of support (others may not be so captivated by the project as oneself).

- It allows others to help and to become involved in a constructive participatory way.

- It aids reflection by providing a variety of perspectives on the effects of action and the constraints experienced.

Action research as a means to bring about change has clearly great potential in all areas of education. Whether one wishes to gain more clarity about a

problem, seek to implement a program, improve instruction or examine a school system's policies, the possibilities of employing action research seem endless. The problem we are facing, however, is that action research involves all those affected and we still tend to be impatient with notions about involving those to be affected. Change or implementation are

still being seen as doing something "to somebody" rather than doing something "with somebody."

There is a wealth of accumulated research literature suggesting that, at the teacher level, the degree of change is strongly related to the extent to which teachers interact with each other and others providing technical help. Collegiality

among teachers as measured by the frequency of communication, mutual support and help is a strong indicator of implementation success. This is what action research is all about.

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Action Research

Teachers' Reflections

The Dark Side of Action Research

Samuel Nguni

Samuel Nguni is a secondary school history teacher and curriculum developer from Tanzania. Presently, he is on leave to complete a master's degree in secondary education at the University of Alberta. He cautions that we should not be overly optimistic about establishing action research in current educational structures. Given the limited resources available to teachers, more conventional and traditional "scientific" research may continue to dominate educational discourse. Samuel pinpoints a few alternatives that may help to broaden the conversation and to foster the development of collaborative action research communities.

This short essay deals with the important question of the necessity of action research to be able to establish itself in the institutional frameworks that currently operate. Although the idea of action research has been received with great enthusiasm and euphoria, it still has a long and bitter way to go until it turns itself into an ongoing reality. This will be possible if action research succeeds in gaining a strong foothold in the existing school and educational structures.

Although some minor inroads have been made by action researchers in certain countries, notably Australia (Carr and Kemmis 1983), United States (McCutcheon and Sanders 1984), Britain (Elliot 1976), these attempts are still at their very early stages. They have yet to take serious root.

The idea of action research, in short, is still facing resistance

and attacks both from the educational system and school structures and from the well established and accepted research systems. At its worst, for example, action research has been characterized as being equivalent to nothing more than a "charismatic movement." Thus, it is no wonder that Gibson (1985) and Tripp (1984) comment that "action research sometimes has the appearance of a faddish, even charismatic movement, susceptible to all the dangers of a bandwagon approach."

The Emergence and Development of the Idea of Action Research

The historical emergence and subsequent crystallization of the idea of action research goes as far back as the 1930s. It was in that decade that some social psychologists and educators (whose intent was not to

challenge the existing research culture but to supplement it) came up with the idea of action research. The term itself was coined by Kurt Lewin in 1944. In the decades between 1940 and 1970, the idea of action research rose in prominence, then fell into decline—partly because it was not well established both theoretically and practically. Few took the idea seriously. In addition, action research received all kinds of attacks from the other well established forms of research.

But from the 1970s, there has been a new resurgence of the idea of action research especially in countries like Britain and Australia and recently in the United States and Canada. Although claims of small successes have been reported from these countries, many of these action research reports do largely suggest that the action

research culture is yet to be fully established in their educational and school systems and structures.

Throughout its existence the action research movement has had an intent to expand the research culture from research specialists to include school practitioners. School practitioners are the people who implement everyday educational and classroom tasks. Therefore, the action research movement had the involvement of both research specialist and classroom teacher in the study and application of research into educational problems in a particular classroom or school setting.

This type of involvement in research by the research specialist and classroom teacher as a team has been characterized as a "collaboration" into solving educational problems. The teacher and the research specialist both become "subjects" in the research process. They are both accountable for the final product of the research process. The "object" of their research or inquiry is educational problems that have to be theorized and solved.

The action research movement has subsequently devised another version of involvement—teachers doing the research alone in their classrooms or schools. This does not exclude the teacher from asking and seeking ideas and help from other teachers or from research specialists outside the school.

The general objective of action research (and both a distinction and an area of criticism) is immediate application of ideas in a classroom or school setting rather than the development of

universal theories or findings for general application. Therefore, action research has placed its emphasis on the problems of the here and now—in a local setting. Its findings are to be evaluated in terms of local applicability, not in terms of universal validity.

The general purpose of action research seems to be twofold: it is intended to improve school practice and at the same time to improve those who try to improve the practices. The research function is combined with teacher growth in such qualities as objectivity, skill in research process, habits of thinking, ability to work harmoniously with others and professional spirit.

If most teachers are to be involved in any sort of research activity, it would have to be in the area of action research. This is because the tasks of carrying out action research (as opposed to fundamental or applied research) are cheap both in terms of money and time. Action research involves questioning one's own practice in a local and everyday setting. This means carrying out modest studies that, although they are done cheaply, can improve local classroom practice.

Traditional research (that is, fundamental and applied research) involves large sums of money and resources, a lot of time and a specialized or technical background; teachers do not have all these things to enable them to carry out such types of research.

Teachers are unlikely, given the present and prevailing constraints in educational and school systems, to get sizable funding or time to do fundamental or applied research. Thus, the only remaining alternative is to let

teachers engage in action research which is cheap and within the confines of teacher capability and constraints.

Problems Facing Action Research

Action research faces a number of problems as it struggles to legitimize itself. These problems exist at both theoretical and practical levels.

At the theoretical level action research faces the problem of legitimation and identification. What is involved in action research? What is the difference between action research and commonsense? How is action research to be done and by whom? What do terms and concepts like "collaboration", "facilitation", "emancipation", "community" and "critical thinking" mean? Some of these questions have been raised by people like Gibson (1985). These questions are in themselves quite important and reasonable. They do not necessarily intend to challenge the idea of action research but rather they help to clarify and enhance action research struggles.

The other important problems that the action research movement faces arise at the level of practice and the institutional character of the school and educational system and structures. Currently existing practices and institutional frameworks tend to favor the traditional research forms and paradigms which largely regard research as being exclusively a specialized activity undertaken by specialized and trained researchers. This implies that for research to be "good," it cannot be done by just anybody. It has to be done by a well trained, specialized researcher.

Teachers tend to be viewed as mere providers of information

about their practice, while researchers are seen as the collectors of information for subsequent interpretation and publication. The school and educational systems and structures are in themselves built on this premise of research being a specialized activity undertaken by specialized people. As a result, there is a tendency to perpetuate this division of labor among the different levels of the educational system. Thus, the elementary and secondary levels of the educational system are not regarded as areas where practising teachers can carry out their own research work; they are seen as areas where research results are to be implemented after specialized researchers have done their work and produced their findings.

The higher educational institutions and departments of education are considered as areas where the research that is aimed at improving the educational system and practice is done. Specialized researchers receive funding and are given the task of carrying out research.

Given the above division of labor within the educational system, any movement like action research (which intends to change the already existing institutional framework) faces a problem of legitimacy and acceptance. It faces the problem of how to get itself a strong foothold in the educational system and structures which have been conditioned to operate within the culture of traditional forms of research. How can action research permeate these seemingly resistant structures and gain acceptance as legitimate research? What form of institutional arrangements

and what kind of changes should be made within the existing structures, so that eventually there is a guarantee that teachers, as practitioners, actually carry out action research as a main form of questioning and improving their practice? These are the kinds of questions open to the action research movement.

We can point to the fact that the administrative structures of school systems as they are at present do not lend themselves easily to changes or innovations whether coming from within or outside the school. School administration is vested with the task of ensuring the achievement of certain specific objectives structured within a strict timetable. The attainment of these various objectives is measured in terms of students' examination results. The schools tend to be evaluated (by students, parents, the public and the education department) on their achievements through these examinations, not on how much research or innovations they have done.

Given these circumstances, the school administration tends to observe a strict timetable to reach the objectives set for the school. The administration would be unlikely to welcome innovations that work against the completion of teaching the official curriculum.

Teachers, on the other hand, are already overburdened with many tasks both in and outside the schools. Many teachers are unlikely to find time to do anything extra apart from teaching and extracurricular tasks.

Therefore, in fact, action research faces problems at different levels of the educational system. In order to become well established in school and educational systems,

it needs to confront some difficult issues. The following are some areas where problems exist.

- Selling the idea to the teacher who may now be convinced that action research is just another weight on top of the existing burden of teaching the curriculum and handling the various extracurricular activities. What are the benefits of action research in terms of professional advancement?

- Selling to the school administration the idea that action research is fundamentally "good" for enhancing and advancing school practices without upsetting the existing balance of power and school structure, that teachers are able to fulfill their everyday teaching duties and to carry out modest research tasks. The two activities should be complementary rather than contradictory.

- Convincing departments of education that action research does not affect school imposed activities of teaching. Can action research, in fact, advance teachers' professionalism and at the same time help to improve classroom and school practice? The education department as a policy-making body will have to consider carefully the practical implications of action research in the operation of everyday classroom and school practice. Will action research being carried out by teachers lead to disruption, chaos or the actual strengthening of classroom and school practice? What will happen to student advancement if action research proves to be an extra burden on teachers such that it reduces their capacity to prepare lessons and to teach properly?

- Convincing the research specialist, who believes in

“good” research, that action research is actually something beyond mere “commonsense,” that it will improve classroom and school practice and is not just another commonsense undertaking hidden under the name and slogan of action research.

Conclusion

Although action research faces the above mentioned problems both at theoretical and practical levels, this does not imply that it cannot be established in the educational and school systems. Even though school and educational structures now tend to operate to the advantage of other long established and accepted forms of research, there is still ample room to accommodate action research. This accommodation can occur within the existing system. What is needed is for the action research movement to begin to develop and introduce some aspects of structural frameworks where teachers would be in the forefront in questioning and improving their own practice.

These new institutional frameworks would involve such things as the change of attitudes of individual teachers, the school administration and the education department. These will have to accept and try out these new ideas and assess their implications for school practice.

Examples of changes that could be incorporated within the existing structural framework could be as follows.

1. At the individual level, teachers could be encouraged to conduct ongoing systematic research in their classrooms by inviting a trusted colleague to

observe their teaching, interviewing students about a set of lessons, reflecting on a lesson, etc. This activity can provide information about the nature of specific matters and their effectiveness (or ineffectiveness) in a form which teachers can use as a basis to decide what they can change in order to improve their practice. These small research reports could be published in professional journals or produced in school reports.

2. Teachers could be encouraged to keep an ongoing record of everyday classroom practice in the form of a journal. The journal then becomes a means of both problematizing practice and tying together the moments of action research. The journal is seen as a framework for thinking about thought, feeling and action. The record will hold things still so they can be examined.

3. At the level of the school, changes can also be instituted. The school can be organized for the critical development of staff groups to investigate school level practice. This could be done through such structures as school based curriculum development and school controlled inservice education. At the same time schools could institute and develop a much more flexible timetable which can free teachers to support one another in classroom research activities.

4. At the professional level, the various subject area specialist councils could be good arenas for developing action research. For example, they could encourage teachers to produce research reports each

year to be reported at sessions during the annual conference. These reports could then be published in the councils' journals.

5. School districts and departments of education can arrange extensive and intensive inservice courses for teachers to familiarize them with this alternative form of research. This will enhance the idea and inform teachers about what is involved. As well, they might encourage incentives for teachers who engage in action research and their own professional development.

These are just a few suggested changes that could be tried in the school system to test the extent to which action research can really be legitimate and accepted. I still hope that action research can be a viable alternative and supplement to existing traditional research, as a means of improving educational practice.

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Action Research Teachers' Reflections

Action Research as Educational Research

Yvette M d'Entremont

Yvette d'Entremont is a high school mathematics teacher from Nova Scotia. She is currently on educational leave to pursue a doctoral program in secondary education at the University of Alberta. In this article she explores the question of whether or not action research may legitimately be called educational research. She points out that action research as an "on-the-spot process designed to look into concrete concerns in an immediate setting" is not the same as traditional educational research. Action research acts as a catalyst and a vehicle for teachers to become more critically reflective of their own practice. Can this be part of an expanded idea of educational research? Can the results of action research be generalizable?

As a teacher I have been asked at various times if I would answer a questionnaire as part of a research study. The questionnaire is usually accompanied by a brief, polite covering letter stating the research question. My first reaction is usually, "Oh no! Not another one of these!". However, I feel that it is my professional duty to complete the questionnaire and return it to the researcher. So I go through the questionnaire quickly, feeling that I am only one fish in a big pond of many respondents. I am basically giving the researcher the information requested by the questionnaire, but sometimes I wonder if the questionnaire is really going to answer the research question.

I wonder, too, if my responses are worth recording. Often I do not care one way or another

what the researcher's results will be because the question is not an issue for my teaching. But my questions and concerns about the research study remain private. I never get to see or speak to the researcher. Rarely do I see the results of the study. When I do, they are presented in a specialized research language which can only be interpreted by members of the research community.

The Gap between Research and Practice

There is a lack of communication between "educational research" and the everyday workaday world in which the activities being researched take place. Research findings rarely interest the practitioner who lives in the everyday world of the classroom because the language of that world does not appear in

research findings. Most teachers would like an immediate and simple solution to a specific classroom problem. Although traditional educational research can provide some general guidelines concerning the improvement of practice, these guidelines may not be specific enough for the practitioner.

To most teachers research is an activity carried out by people working towards a higher degree or people in an institute of higher learning fulfilling a contract. The research study may last months or years and involve the collection and analysis of data that will be presented in the research findings. This view of educational research tends to exclude the interests and involvement of the teachers.

Research should be a means by which teachers themselves are able to reflect on their

practice, modify their procedures and improve their teaching. There must be a link between research and the everyday world. Action research may be that missing link.

The following report by Penny (Figure 1) is an example of action research. We see that the research question is now a concern of the teacher and that she is interested in the solution to that question.

In this case we see a teacher attempting to improve her practice by discovering whether or not children are more attentive when she reads or tells a story. The teacher is interested in the results of her study because the results will give an immediate feedback for her practice.

Educational researchers may have problems with Penny's study. They may doubt its validity because she has studied only one group of students and she did not have precise sampling techniques. She did not establish very much control over other possible variables such as achievement; her findings may not be generalizable to other comparable situations. This raises the question, can action research be properly called educational research?

Nature of Action Research

The phrase "lessening the gap between research and practice" (Ross 1984, 114) has been used to define the aim of action research.

Action research is a form of self-reflective investigation carried out by teachers with the aim of improving teaching. In terms of method, a self-reflective spiral of cycles of planning, acting, observing and reflecting is central to the action research approach. Action research allows

Figure 1

York Street School

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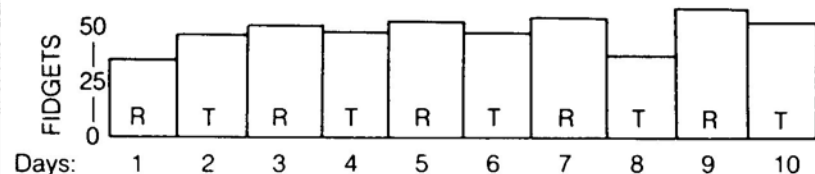
Story Telling

Elaine Moss's article in *Education 3-13* (edited by Colin Richards, 1978) on 'story telling' inspired me to carry out an experiment on my first year junior class.

For story time over the last fortnight I had chosen *Charlotte's Web* by E. B. White. Instead of reading aloud every chapter, I read alternate chapters but told the in-between ones. This meant quite a bit of work each evening in preparing the chapters which were to be 'told'. I put a few notes on a postcard so as to get the sequence of events right.

In order to monitor the effect on the children I asked Marian (the nursery assistant) to join us and count the number of "fidgets". She used a hand counter for this and sat with it hidden in her lap. We had a few trial runs beforehand at recording the level of fidgeting. Obviously there is an arbitrary element in deciding what constitutes a "fidget", but we found that Marian's counts over several days accorded with my subjective impression of the children's fidgeting. On the first trial run I told the children that Marian was joining us to listen to the stories and that she was also going to see how much they fidgeted - but we made no further reference to this. (I hope this was ethical!) I also told the children that I was going to experiment with reading and telling the story and that afterwards I would ask them which they preferred.

These are the results over ten days. The height of the histogram represents the number of fidgets; 'R' means that I read and 'T' that I told the story.



The difficulty is in measuring fidgets, but Marian and I both thought she was recording consistently. It would seem that, apart from the first day, my story telling held the children's attention more than my reading aloud.

In a show of hands on day 10, 18 of the children voted for 'telling' as better and 12 for 'reading' as better. Some of their comments were interesting: 'It sounds more like you were there' (pro-telling); 'I was worried that you might miss something out' (pro-reading).

Penny

(Hustler, Cassidy and Cuff 1986, 23)

the participants to improve: 1) their own practice, 2) their understanding of the practices and 3) the situations in which

the practices are carried out.

A fundamental concern of action researchers is to look critically at themselves in order

Figure 2

York Street School

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Classroom Queue

I was concerned about the length of the queue at my desk of children wanting their assignments marked or seeking assistance with their work. I discussed it with the class (3rd years), the children agreed that too much time was being wasted in the queue, and we decided on two kinds of monitoring. During individual work periods one of the children would keep a record every four minutes of the people at my desk (we used an egg timer) and I would keep a record of why each child came to me at the desk. Each morning first thing I would announce the average queue length for the previous day.

After the first week it became clear that of the 30 people in the class 8 were spending much more time than the rest in the queue and so I discussed with them the importance of their learning to be independent and self-sufficient. Also I changed the routine for handing work in (two wire trays at the other end of the room instead of piling it on my desk).

By the end of the second week the queue had shrunk from an average of six people to an average of two. We agreed that the study had been worthwhile and decided that if the queue grew long again we would repeat the monitoring.

I don't think that either my pep talk to the persistent queuers, or the wire trays, explain the change. My guess is that it was due to class interest in shortening the queue. But the experiment achieved what I wanted it to do, and the children obviously enjoyed being on the 'inside'.

Martha

(Hustler, Cassidy and Cuff 1986, 22)

to study the process of their own practice by reflecting upon their own experience during the research. Action research is a process whereby the researcher and the practitioner are one and the same. In this case, the researcher is the one affected by the results of the study. The belief here is that the practitioner will be encouraged to take responsibility for making and then evaluating decisions by gathering relevant information in the classroom. The issue under study should be an issue that is identified by the teacher as worthy of investigation.

Studying the issue does not

require sophisticated research methods. Consider the case of Martha (Figure 2) who was trying to shorten the line of students at her desk. In Martha's case, she went through the following five stages: 1) she experienced a problem, 2) she and the students came up with a solution, 3) she and the students implemented the proposed solution, 4) she and the students evaluated the outcomes of their actions, 5) she reflected upon the problem and the action taken to determine whether or not the proposed solution was in fact a solution and what action she would take

if the problem presented itself once more.

Action research is more concerned with the immediate application rather than the development of a general theory. It focuses on a specific concern or problem in a particular setting. Therefore, this investigation provided Martha with a means by which she was able to reflect upon an immediate concern she was experiencing in the classroom and to act upon it.

Shumsky (1958, 16) contrasted action research with scientific educational research as being the difference between action oriented research and fundamental research. He noted the contrast as follows:

—Action research is usually conducted to improve practices, while fundamental research is usually conducted to establish broad generalizations.

—Fundamental research is done by "outside" specialists, while action research is done by people who want to evaluate their own work situation.

—Fundamental research is based on the belief that the dissemination of research results is an effective way of improving educational practices. Action research represents the belief that teachers are more apt to learn by their own experimentation and evaluation.

The question then is, "Is action research educational research?" It is an important question to answer both from the point of view of educational research and for teaching. Can it narrow the gap between research and practice? Is it legitimate research?

Traditions of Educational Research

Although traditional educational research is not often read by

teachers, it does affect them. Research influences policy-making, inservice practice and school programs. Sometimes this application administratively controls practice and prevents teachers from having deeper insights. But, because action research is done by teachers on their own practice, it would seem to avoid the problems of misapplication and give teachers greater control, creating a more reflective practice. Often action research remains private, not reported, not published, not funded, not research, in the eyes of the researcher.

Should educational research be less concerned with generalizability and more concerned with application by the practitioner? Should action research be more concerned with publication and with questions of validity? Perhaps to find an answer to these questions we should briefly reflect on the history of educational research.

Verma and Beard (1981, 18) have defined educational research as—
an organized and deliberate effort to collect new information or utilize existing information for a specific and new purpose. It is directed towards seeking answers to worthwhile, fairly important and fundamental questions through the application of sound and acceptable methods.

Through the years the nature of educational research has taken various twists and turns. Around the beginning of the century, educational theory was philosophical in character. The task of educational research was to encourage teachers to become more aware of their role as educators through a process of reflection. Therefore, the role of educational theory and research was to transform the outlook of the practitioner and to change the unreflective attitudes and

beliefs of the teacher into reflective attitudes that would justify and support the educational aims of the practitioner. The difficulty with this is that there was a wide gulf between the abstract nature of the implications of educational research and the concrete realities of the teaching profession.

During the 1920s educational research began to adopt approaches similar to the natural sciences, collecting descriptive data about educational phenomena, like subject promotion and the development of psychological testing instruments. It was argued that, if the attitudes, thoughts and beliefs of teachers became subject to the critical characteristics of scientific enquiry, education would be improved. With this "scientific approach," educational research sought to improve the practice of practitioners by providing knowledge about which educational practices could be assessed in order to make these practices more effective.

The scientific view of educational research demanded scientific expertise and therefore implied that only people who had acquired this expertise were competent to make decisions about educational policies and practices. Teachers themselves were not responsible for making major educational decisions but they were needed to implement the decisions that were made by the researchers on the basis of their scientific knowledge. Until the end of the 1960s, the consensus was that the scientific method was the most appropriate framework in which to do educational research.

Forms of Action Research

Action research is not new. It was first introduced in the

1940s. It was partly a reaction to scientific research and developed alongside scientific research. The 1940s and early 1950s saw an outpouring of reports on action research by Sanford (1982, 72) and others who were taken up by "personality research" and formed the "impression that action research was most certainly a dominant trend in social psychology." Action research went into decline in the late 1950s because researchers discovered that action research proposals were rarely the recipients of awards from the funding agencies.

The 1960s and early 1970s rekindled the idea that teachers could be involved in researching their own classrooms. The revival in action research came from the work of the 1973-76 Ford Teaching Project in the United Kingdom. That project involved teachers in collaborative action research into their own practices. This form of action research can be classified as the interpretive approach.

Carr and Kemmis (1986) have introduced a critical form of action research. They have classified educational research into three approaches: the natural scientific approach, the interpretive approach and the critical approach. The critical approach is based on a criticism of the natural scientific and interpretive approaches. Critical action research does not regard practice as "phenomena" which is independent of the researcher-practitioner. Action researchers view their educational practices as their own. Educational problems are not merely problems of achieving known ends, but are problems which involve competing values and interactions between different

people who act with different values, different understandings on a common situation.

A critical action researcher does not accept the interpretive view of educational practices either. Where the natural scientific approach tends to reduce things to descriptions of behaviors and the conditions which determine these, the interpretive approach tends to explain educational practices as expressions of practitioners' intentions, values and understandings. This suggests that ideas alone guide action. This view fails to take into account other conditions which may distort or change the practitioners' understandings. A critical action researcher does accept that understanding the way practitioners interpret their practices and their situations is important but is not sufficient to change educational practices.

Different methods of educational research involve different views of the relationship between educational theory and educational practice. The scientific approach views educational change as technical, asking, how effective are the means in the achievement of the desired outcome. The interpretive approach views educational research as practical, asking, in what ways do the participants understand a program. The critical approach views educational change as both practical and emancipatory, asking, what are the underlying perspectives of programs that are usually taken for granted and thus hidden from view.

Each approach sees the relationship between the researcher and the research activity differently and each is open to question.

The scientific approach uses the researcher as an instrument

by which research is undertaken; the researcher stands on the outside but hopes to arrive at an objective conclusion with the use of instruments such as tests and questionnaires. Will quantitative data subjected to sophisticated statistical analysis lead to improved practice?

The interpretive researcher wishes to reveal the meaning of particular aspects of social life by bringing to light the underlying structures that govern the ways in which individuals act in certain situations. People give personal meaning to each situation experienced and they interpret the same event in different ways. Will an evaluation by researchers who show interest in the meanings practitioners give to a situation be meaningful to educational change and practice?

The critical approach views educational research as being conducted by those involved in education themselves. The researcher becomes involved with the subjects, enters into their world and attempts to engage them in reflective activity. This reflective activity leads to new questions which then lead to more reflective activity. This newly gained consciousness and critical knowledge then should lead to action.

Carr and Kemmis claim that the critical approach seems to bridge the gap between theory and practice by an interest in emancipation from hidden assumptions. Will critical insights necessarily lead to reformed practice and whose insights do we accept?

The question of whether or not action research is appropriate educational research depends a great deal on what one calls appropriate research. Cohen and

Manion (1985), for example, see a similarity between action research and fundamental research in that they both use a scientific method. This concept of action research appears to be a version of the experimental design model where a "before" and "after" measurement is taken. This concept would imply that quantitative methods are a feature of this notion of action research. Applied research, in its concern for testing theories and establishing relationships is rigorous in its methods, whereas action research focuses on a specific problem in a specific setting and, therefore, interprets the scientific method more loosely. For a researcher, this presents certain strengths and weaknesses; the practitioner will be interested in the results and the research may lead to improved practice. But can valid generalizations be made?

Finch (1986) and Hustler, Cassidy and Cuff (1986) offer a different view of action research. They claim that, because action research is an inquiry into matters of concern to teachers, it is a form of interpretive research by practitioners. Thus, qualitative methods are more appropriate.

Action research presents some methodological problems. Methods cannot be pre-planned to the extent that traditional experimental procedures demand. As the research develops, so do the ideas which then lead to action which may be different from the proposed action. This leads to more information and analysis and more ideas and so on. This does not imply that action research should be merely problem-solving and that all decisions made by practitioners in the classroom can be regarded as action research.

The goal of action research is not to produce a study which meets the criteria for scientific research but to produce a study that will resolve an issue as the research progresses. As the name implies, action research involves action, which may lead back to the problem at hand and into unforeseen directions, which are followed up by the researcher. This involves reflection on the part of the researcher as to what is really happening as the investigation develops. Action research requires that researchers examine closely their methods, attitudes, beliefs and values. This is not an easy task.

The principal characteristic of action research is that it is an on-the-spot process designed to look into a concrete concern in an immediate setting. It involves a step-by-step procedure which is monitored over a period of time with various instruments (observations, questionnaires, interviews, journals) so that feedback may be received to aid in any modifications, adjustments or changes that, in turn, will be beneficial to all involved.

Unlike other methods, in action research one factor is not considered in isolation away from the setting and the context that give it meaning. In addition, a characteristic which makes action research suitable for research in classrooms and schools is its flexibility and adaptability. Because action research is on-the-spot research, it allows for changes along the way.

Action research relies mainly on action, observation and reflection. Over a period of time, project information is collected, shared, discussed, recorded and evaluated. From time to time this series of events may be

reviewed in order to reflect upon and improve the research process. Perhaps in this respect, action research is superior to the more experimental methods where control groups are used to test hypotheses.

Action Research Applications

Action research is appropriate in a situation that requires specific knowledge about a specific problem in a specific setting. There are many areas of school life where action research is applicable, for example: curriculum, teaching methods, learning strategies, attitudes and values, inservice development of teachers, management/control, administration.

Participants in an action research situation may be one teacher, a group of teachers or teachers and researchers working collaboratively. Perhaps one of the disadvantages of a teacher doing action research alone is that it may be difficult to analyze what is taken-for-granted knowledge and intuitive habits in order to consider alternative ways of working. Also it may be difficult to analyze in a valid way the data that has been gathered.

A group of teachers working together, or a teacher and researcher working collaboratively, can help to make observations focus on specific aspects of the classroom environment; they can talk to students and assist teachers in reflecting on their experiences. Collaborators can also be a source of emotional support for each other.

The advantages of action research are threefold: 1) the results are more likely to be used by other teachers sharing a similar concern, 2) such involvement is more likely to

bring to the fore the complexities of classroom life, 3) a time lapse between research and implementation is likely to be virtually eliminated.

Action research is noted for its overall orientation and methodology and not its use of a particular set of research techniques. The method is essentially participatory in that it involves participants in reflection on their practices through cycles of planning, acting, observing and reflecting. Data collection and analysis of data bears a close resemblance to techniques employed by interpretive researchers (ethnographers, case study researchers, etc) rather than the techniques used by empirical-analytic researchers (statistical analysis of data, experiments, etc). This is so because the "objects" of action research are practices and not mere behaviors. If we return to Penny, we see that she was concerned about her practice—whether or not story "reading" or story "telling" had a different effect on her pupils. She was concerned about whether or not fidgeting was an effect of her practice. Although Penny's problem was solved, chances are that this knowledge was not made public, it may not be of interest to other practitioners and the methods used may not have been reliable because there was no sampling technique and no control over extraneous variables.

Is Action Research Educational Research?

Action research seems to be well on the way to being accepted as a legitimate form of research. It certainly is not new. The action research movement in education was initiated in the 1940s in the United States and reached its

peak in the 1960s. The publication of books such as John Nixon's *A Teacher's Guide to Action Research* marks some recognition that teachers can and do produce worthwhile research in their own classrooms.

Research should be involved in helping teachers to improve the learning experience of the children in their classes; it should be helping us to question and better understand our practices in order to move confidently into improved ways of working. Perhaps action research can provide the partnership between schools and institutions of higher learning.

Teachers should be encouraged to take a look into their practice. This is not to say that all teachers should be involved in action research. Those who are will meet with criticism from people who are of the opinion that action research conducted by teachers is lacking in sound methodology and that fundamental research is superior. Others may argue that action research is not research at all.

If we return to the definitions of educational research we can decide for ourselves if action research is a valid form of research. Rutman (1984, 42) says the following about a valid measurement—

The information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the interpretation arrived at is valid for the given use.

Since action research is research in one's own practice, it follows that only practitioners and groups of practitioners can carry out action research. Practitioners involved in action research will be better able to interpret the situation and analyze the results than an outside researcher. Even though the method may be a valid measurement, the results must be important to other practitioners if the information gathered is to be valid.

Educational research expands knowledge about worthwhile questions and action research certainly fits into that category. It allows us to find out more about schools and the people and practices in them. My answer is "yes" to the question, "Is action research educational research?" However, action research should be more than problem-solving. The concern or question to be studied should be valid not only to the action researcher but to other practitioners as well. Once the study has been completed, the researcher should be able to validate conclusions from the results. The

results should be available to other practitioners so that they may also benefit and improve their practice. After all, improved practice is what educational research is all about.

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Conclusion

An Afterword

Terry Carson and J-C Couture

We are writing this afterword several months after collecting and editing the articles for the monograph. So we now have a little distance to better reflect on the thoughts and experiences recounted in it. What have we learned from this project? What are the problems and potentials for action research?

One of the things that immediately strikes us is how the language of the monograph is different from the experience of actually doing action research. What is missing in the monograph is the excitement, the anxiety and the messiness of being engaged in action research projects. Nor does it reveal the hours of conversation required as we try to retain our lofty ideals of community building, collaboration and reflective practice in the face of the realities of time, energy and our own work situations.

The collection of articles says more than the experience too. From the start we were aware that there were different kinds of interests which motivated the separate projects. But despite these differences, we can now also better see an overall unity of purpose. That unity of purpose—educators developing the understanding and the power to improve education through their own efforts—was

not always apparent at the time. There are some limitations, too, which have emerged. We would like to close with some of these realizations in the hope that they might inform future efforts.

1. Collaboration between teachers and university people is not natural. There are many barriers to university people and classroom teachers working together. For example, the mind set that theory comes from the university to be put into practice in schools is deeply ingrained as a taken-for-granted assumption. True collaboration is based upon a mutuality of interest and an equality of power. It takes more than mutual goodwill to overcome old habits. It requires critically reflective work to discern the barriers and to discover a shared purpose.

2. The places in which we work operate on the assumption that research and practice are separate functions done by different institutions. We have actively to seek out and build spaces for dialogue between university people and schools.

3. Although the action research spiral of plan, act, observe and reflect looks very much like everyday practice, it is, in fact, quite different. Particularly, by concentration on systematic observation and

reflection, taken-for-granted assumptions begin to come into view and lead to new discoveries.

4. Because action research projects are rooted in the real concerns of the participants, they reflect a variety of interests ranging from how-to problems to more fundamental philosophical questions. But whatever the starting point, each project summarized here did lead to an unconscious and conscious unravelling of the limits and possibilities of educational practice.

5. Our experience shows that teachers do have a role to play in educational research, provided they have the time and support for doing it. This is based upon the idea that research is close to everyday school practice. We see a lot of potential for this kind of critically reflective research in curriculum development, implementation, evaluation and integration.

6. It was our hope that in the doing of these projects action research might serve as a focal practice bringing educators together. To some extent this has been realized. We may discern, within the pages of this monograph, the beginnings of communities of educators dedicated to a grassroots improvement of school life.

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