A study examined the collaborative process in young children and also the role that the collaborative process played in improving the quality of classroom instruction. Subjects were approximately 60 students in a grade 3/4 pod of two classroom teachers at the University Elementary School, Calgary. A teaching unit of 6 weeks duration dealing with Greek mythology was developed in which a number of plays were shared with the class as a whole, and then the students (working in small groups) developed, wrote, and staged plays. Data were collected through ongoing observations of students in the classroom, field notes, audio- and videotapes of selected small group sessions, and responses to questionnaires. Results indicated that: (1) formal and informal demonstration of the process of collaboration proved to be an effective way of enhancing understanding of the concept; (2) teacher modeling of the collaborative process was useful and popular with students; (3) talk became the key element in the collaborative process; and (4) selecting group members on the basis of what could be accomplished in the group, rather than forming same-sex groups, allowed for new and innovative relationships to be formed among group members. Implications for instruction include: children need to have the collaborative process modelled for them; the language of collaboration needs to be inculcated in young children; and teacher direction is needed to ensure that collaboration is not restricted to same-sex arrangements. (Contains 21 references and an evaluation form.) (RS)
Empowering Teachers and Students through the Collaborative Process

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Introduction

Fullan and Hargreaves state that "we develop through our relationships, especially those with others who are significant for us. These significant others act as a kind of mirror for our developing selves" (p. 37). This development of ourselves as teachers can also be seen as an empowering process and, despite its somewhat tattered image as a vehicle for describing what collaborative work can do for teachers, the term empowerment is, we believe, an appropriate one for describing what was accomplished in one school over the course of one year. Fitzclarence and Giroux (1984) state "power is at the root of all forms of behavior in which people say no, struggle, resist, use opposition forms of discourse, and dream new possibilities for existence." Teachers who are able to work together to solve problems, to dream up new ways of learning to teach, are enabled to gain a new sense of power, that of self-control.

Clift et al. (1991) feel that collaboration among teachers and researchers provides the basis for enhancing the process of learning to teach (p. 52). In fact, a number of studies undertaken in the past decades lend support to the view that collaborative action research (Oja and Amullyn, 1989) can facilitate professional learning among teachers (Lieberman, 1988; Rosenholtz, 1989). Hence, as researchers and practitioners begin to explore the role of professional learning and collaboration in the school (Trimbur, 1985), it is important to study those factors that enable teachers, students, and researchers to work together to enhance thinking and learning within the context of classroom.
With support from the Faculty of Education at the University of Calgary and the Calgary Board of Education, three staff members at University Elementary School and a faculty member at the University of Calgary undertook, in the fall of the school year, an action research project in which we examined the collaborative process in sixty, 8-12 year old children in an open classroom setting. The project evolved from a collaborative "mandate" which had been part of school's philosophy since its inception in 1960's as a demonstration school. In the previous year to the actual study, University Elementary School had put together a committee to look more closely at how the University of Calgary's interest in classroom research might be integrated and/or combined with the school's interest in keeping abreast of current research and practice in teaching. As a result of this series of meetings, a working group made up of three teachers working in one open area of the school (here designated as a teaching block) met with an instructor from the university to examine ways in which we might more constructively work together to examine how children "pursue academic goals through collaborative efforts" (Clift, et al., 1991, p. 8).

These initial meetings led us to the development of this particular action research project, a project which began in August, 1992 and was completed in June, 1992. In this article we further describe the background for the project (including its rationale) and related literature in the area of collaborative learning, the design of the study the research questions which framed the study, the findings, and the implications of this study for classroom practice.
Purpose of the project

Given that collaboration has value as a means for enhancing teaching, learning, and thinking, the purpose of this project was to examine how the collaborative process empowered teachers by enhancing the quality of each teacher's instruction and by enabling children to work collaboratively to enhance each other's thinking and learning.

Theoretical Framework for the Project

Collaborative action research (Clift, et al., 1991) is characterized by its emphasis on group orientation, its focus on practical problems of individual teachers or schools, its emphasis on professional development, and its support for the construction of an environment that provides time and support for teachers and university staff to work together (p. 53). Another common characteristic of this kind of research is that research findings and techniques are frequently used in seeking solutions to questions posed, and that teachers and researchers sometimes collaborate in the production of reports of their findings.

One of the basic underpinnings to this kind of research is that it should take us beyond the search for solutions to immediate problems to the development of what Clift et al. (1991) call "a professional learning culture in schools that emphasize inquiry and reflection" (p. 54).
One important point that needs to be made here is the distinction between Slavin's (1990) notion of cooperative learning and the term we prefer to use, namely, collaborative learning. Our preference for the use of the latter term rests upon the assumption that "the collaborative process" is one that invites both teachers and students to negotiate the context and process of collaboration to arrive at the best mix in terms of student and teacher involvement. In other words, cooperative learning suggests that the learning enterprise is teacher-directed whereas collaborative learning suggests that learning is a mutually negotiated enterprise, with respect being given to the rights and responsibilities of the children, as well as the teachers.

In addition, within the framework of the collaborative process, we see the role of the teacher from a research, as well as a facilitative perspective. The roots of the teacher researcher movement are to be found in action research, a term defined by Wann and Foshay (1954) as research undertaken at the action level to improve practices (reported in Strickland, 1988, p. 755). The notion of teacher-as-researcher fits nicely within the collaborative enterprise in that the teacher researcher is an observer, a learner, and a researcher. Above all, collaboration is an essential component of the teacher-as-researcher process.

An integral part of the teacher/researcher movement is the need to collaborate when teachers are engaged in a project of mutual interest. In keeping with this view, Fullan and Hargreaves (1991) state that "we develop through our relationships, especially those
with others who are significant for us. These significant others act as a kind of mirror for our developing selves" (p. 37). They envision two basic types of school cultures - individualistic and collaborative ones.

In their description of individualism Fullan and Hargreaves (1991) state "First, as we seek to eliminate individualism (habitual patterns of working alone), we should not eradicate individuality (voicing of disagreement, opportunity for solitude and experiences of personal meaning) with it. Individuality is still the key to personal renewal, which in turn is the foundation for collective renewal". This individualism is evident in children who are reluctant to show intelligence or display intelligence less than competent. Individualism limits growth and improvement because it blocks access to ideas and strategies of learning that might offer better approach. They recommend that help be disassociated from evaluation. In this case, then, it is essential that the teacher is not always the help giver. If the teacher is always seen as a help giver, it can reflect a burden of guilt on those who always receive help. Fullan and Hargreaves (1991) describe how some students appear to drive themselves in an attempt to meet virtually unattainable standards of over-achievement which are self imposed or set by parents.

The power of collaboration, unlike the "culture of individualism" is tied to opportunities for continuous improvement and career-long learning: "It is assumed that improvement in teaching is a collective rather that an individual enterprise, and that analysis, evaluation, and experimentation in concert with colleagues are conditions under
which teachers improve" (Rosenholtz, 1989, p. 73). Collaborative "power", if you will, helps to reduce a teacher’s sense of powerlessness and replace it with a greater sense of confidence. This was particularly true for this study; both teachers and university staff felt that they were empowered and that this sense of empowerment could be shared amongst themselves and, in turn, with their students.

Little (1990) identifies four different kinds of collegial relations among teachers: (1) scanning and storytelling, (2) help and assistance, (3) sharing; and (4) joint work. It is this fourth type of collegial behavior that shows the greatest potential for empowering teachers. It represents the strongest form of collaboration (e.g., team teaching, planning, observation, action research, sustained peer coaching, and mentoring, etc.)

Joint work, according to Little (1990), implies and creates stronger interdependence, shared responsibilities, collective commitment, and improvement, and a greater readiness to participate in the difficult business of review and critique (Fullan & Hargreaves, 1991, p. 47). Furthermore, it is this joint work which, if done in a spirit of collaboration, can truly empower teachers, researchers, and students. In sum, the power of collaboration lies in the opportunities it provides for creating a classroom culture that respects, celebrates, and makes allowances for the teacher as a person. It does this by creating an environment that is more satisfying and productive; by creating schools where everyone is valued and where interdependence is nourished.
Literature Review

Rholheiser-Bennett (1986) states that, "cooperative learning involves learners working in small groups toward a mutual goal." She goes on to describe five basic elements which she feels provide "general principles for teachers to structure appropriate cooperative learning lessons to suit their grade level, specific subject area, students, environment, and so forth" (p. 23). These are as follows:

Positive interdependence - students must feel that they are positively interdependent with the other members of their group; that is, they "sink or swim together" (Johnson, Johnson, and Holubec, 1986). The teacher helps structure the positive interdependence; however, it is also a perception that strengthens over time. Positive interdependence can be structured in many ways including establishing mutual goals; dividing labour, materials, resources or information; assigning roles to group members and establishing a group identity.

Face-to-Face Interaction - Students need to interact physically as well as verbally. The interaction patterns promoted by positive interdependence increase the strategy's success. The physical setup of the room and the working areas can greatly enhance face-to-face interaction.

Individual Accountability - Each group member is responsible and accountable for learning the task that the group is engaged in. The group's success is dependent on
the individual learning of all the group members. Collaborative Skills - Students are taught the social skills needed for collaboration and are motivated to practise the skills in their learning group.

Process - Students are given the time and procedures to assess how well they are working as a group. This includes assessing their use of collaborative skills to improve the functioning of the group (p. 23).

Slavin (1991), in a synthesis of the current research on cooperative learning, notes that the term has been offered as a panacea for numerous educational problems; as a means of emphasizing thinking skills and increasing higher-order learning; as an alternative to ability grouping; and as a way to prepare students for an increasingly collaborative work force, to name a few (p. 71). A brief summary of his research findings is presented below:

1. For enhancing student achievement, the most successful approaches have incorporated two key elements: group goals and individual accountability. That is, groups are rewarded based on the individual learning of all group members.

2. When group goals and individual accountability are used, achievement effects of cooperative learning are positive.

3. Achievement effects of cooperative learning have been found to about the same degree at all grade levels (2-12), in all major subjects, and in rural and suburban schools. Effects are equally positive for high, average, and low achievers.
4. Positive effects of cooperative learning have been consistently found on such diverse outcomes as self-esteem, intergroup relations, acceptance of academically handicapped students, attitudes toward school, and ability to work cooperatively (p. 71).

Manning and Lucking (1991) present an overview of cooperative learning methods that they feel hold potential for the schools at all levels. From their perspective, both social and academic needs can be met when students are given the opportunity to work together cooperatively.

Allen, Combs, Hendricks, Nash and Wilson (1988) reported recently on a study of 50 elementary teachers in the Manhattan, Ogden, Kansas school district who initiated the Whole Language Literacy Project. No university or administrative personnel directed this research project. Rather, it began as a "grass roots" project and expanded from there. Allen et al. describe the basic features of this research as entailing the following: observing, questioning, using resources, planning, and sharing (pp. 380-381). Pinell & Matlin's (1989) text represents a recent trend to consolidate findings from classroom research and pass them on to teachers interested in becoming teacher researchers.

The trend toward collaboration between classroom teachers and university professors has been motivated by a number of new directions in research: an increased desire to conduct research in naturalistic settings; the finding that teaching and learning are more context-specific; the emphasis on process in teaching the language arts; and, finally, the use of more naturalistic-research methods wherein teachers assume a central role.
Context for the study

This research project was situated in a grade 3/4 pod of two classroom teachers and approximately 60 students. A third teacher, who had taught at the school and was on sabbatical leave, joined us to form a research team of four individuals.

The school has a direct link with the University of Calgary in that it was originally constructed in the mid 60's as a demonstration school for prospective students. The original design of the school included observation rooms with one-way glass and built-in microphones so that classes of students from the university could observe "model" lessons being taught by teachers who exemplified the ideal in terms of lesson delivery and management techniques.

This early view of instruction has, over the years evolved with increasing emphasis being given to having university students work more directly with children. The end result is that students have left the observation deck to become more directly involved with the children on a one-to-one small group basis.

Basically, what this demonstration school has done is to move in the direction of creating a classroom culture that encourages multi-age classrooms with team teaching, innovations that have been with us for some time but have more recently been revived and re-constituted in classrooms across Canada. The other emphasis, liaison with university faculty and professional development have, in the main, been unique features of both the
school's philosophy and its instructional strategy. For example, the attempts to link university Faculty research interests with University Elementary School staff research interests has given rise to a number of classroom-based projects which have been of benefit to both parties.

This research project began in August of the previous year when the four of us met at the school to discuss the role of the collaborative process, both in terms of our ongoing development as teacher researchers and in terms of its implications for instruction. From that point on, we met regularly (once a week for two hours throughout the school year) to plan and implement this research project.

Our tasks in this project included:

- a search of the relevant literature related to collaborative learning;
- ongoing discussions of our readings of the articles;
- the generation of general research questions and working hypotheses to guide our research;
- the development of an action research project to be undertaken in January, 1992 and completed by June, 1992;
- the preparation of a document in which we analyzed the results of our classroom research looking for patterns (themes) and teaching implications.
Methodology

Design of the study

The purpose of this project was to examine the collaborative process in young children and, at the same time, to examine the role that the collaborative process played in improving the quality of classroom instruction.

Three general questions were formulated to guide the research:

1. Which events in the classroom facilitate or inhibit the collaborative process?

2. What needs to be done (by teachers and students) to achieve an appropriate balance between the need to work together in a collaborative fashion and the need to develop as individuals?

3. What sorts of activities facilitate or inhibit the collaborative process?

A teaching unit dealing with Greek mythology of six weeks duration was developed to situate the project within the schools' program of studies. Print resources utilized for this unit included textbooks, literature selections, and plays. A number of these plays were shared with the class as a whole: some of the plays were staged by group within the class. Following this, the children were encouraged to work together in small groups to develop, write, and stage their own plays.

Group membership varied: a number of students who were engaged in a process of self-selection (usually on the basis of friendship) got together to produce a play, a few
groups were put together by the teacher, while other groups were formed on the basis of topic choice (eg. "I want to work on writing a play about Greek heroes"). Once the groups were formed, they were given the freedom to make decisions about practically every aspect of play production: writing the play, determining roles, building sets, and engaging in necessary revisions or changes to the play as they moved from play creation to play production. Each group then presented its play to the whole class.

In addition to the foregoing play development and production, the children were presented with strategies and/or techniques for working together collaboratively. This "collaborative process" consisted of the following:

- administration of a questionnaire on the first day to get each child’s views on what they saw as collaborative acts.
- teacher demonstration of how collaboration should (and should not) work;
- implementation of collaborative-type games such as "Jigsaw" and "The Puzzle Book", etc. to assist children in developing strategies for working together collaboratively;
- implementing language arts activities which are designed to foster collaboration (eg. "say something", Harste, Burke & Short, 1988);
- daily debriefing sessions in which students and teachers could dialogue about what was, or was not, working.
Data Collection Procedures

Data were collected through ongoing observations of students in the class and through the use of field notes. In addition, selected small group sessions were audio- and video-taped for later analysis and reflection. As well, written responses to the questionnaire were analyzed to see what kinds of understandings about the nature of collaboration were possessed by the students. From time to time, the administrative staff came in to observe the class and to provide another set of lenses for examining the collaborative process. The children were also interviewed and questioned throughout the six week duration of the study for their views on how collaboration was working (or not working) for them.

When the groups were formed for the play writing activity, each of the four teacher researchers assigned themselves to groups and spent time observing the process. During the six week period of the study, the research team met three times a week to compare notes, to look for patterns in the data, and to plan for the following week. At the end of the study, the research team met for an afternoon to engage in a preliminary analysis of the findings of the data. Following this analysis, subsequent meetings were held once a week to review findings and to write up the report. The final meeting was held the first week of July, 1992 to look at editing a draft of the report.

Data Analyses

Data analyses involved systematically searching and arranging field notes, questionnaire responses, audio- and videotapes in order to look for emerging themes and
patterns. Interviews with key informants (i.e. the children) were undertaken after the study was completed to ascertain whether in fact perceptions of what had been observed could be confirmed. Selected research studies were re-read to see how emerging patterns from our data were reflected in other studies. We also revisited our original proposal (and questions) to see what impact our earlier thinking might have on the development of subsequent hypotheses to explain what we had been observing. Finally, we talked to our outside observers as a basis for "triangulating our data".

**Findings**

The findings which emerged from the analyses are presented in the following points:

1. Formal and informal demonstrating of the process proved to be an effective way of enhancing understanding of the concept.

When we demonstrated the process of collaboration through such strategies as "Say Something", "Jigsaw", "The Puzzle Book" etc., there was a positive increase in collaboration among the learners in classroom. This also resulted in an increased interest in the subject matter being studied across the curriculum. What seems evident here is that children needed to see both effective and ineffective kinds of collaboration in order to see and talk about what worked and what did not work. Discussion was essential here because it allowed children to verbalize the collaborative process and interact with their environment through asking questions, clarifying meaning, and exchanging ideas.
Smith (1988) states "The first essential constituent of learning is the opportunity of what can be done and how. Such opportunities may be termed demonstrations" because they literally show a potential learner, 'This is how something is done'. The world continually provides demonstrations, through people and through their products, by acts and by artifacts." He goes on to say "Every act is a cluster of demonstrations" (p. 90).

Demonstrating also provided the basis for children being able to succeed in the learning. When Noel admitted that he was a "poor collaborator" he opened the door to further reflection as to what constitutes effective collaboration. This allowed the group he was working with to discuss how to work cooperatively together. Cambourne (1988) states "that demonstrations are artifacts and/or actions from which we can learn" (p. 4).

Smith (1988) also states that "Even when there is a relevant demonstration, learning may not take place." There has to be some kind of interaction so that "This is how something is done" becomes "This is something I can do" (p. 191).

2. The relevance of modeling in the collaborative process.

Harste, Short and Burke (1988) when describing the "Say Something" technique suggest that teachers should demonstrate how the technique is used by successful language learners by modelling this activity. We found this strategy extremely useful and popular with the students, but we did find we needed to take it one step further and model an
ineffective technique. The things that the teachers demonstrated in the ineffective conferences was the behaviour, actions and conversation of the students in the class.

3. Talk as a Key for Collaborative Thinking

Talk is an ongoing feature of most classrooms. Talk as a tool for collaborative thinking has the following features:

a) It is social.

b) It has a focus and a purpose for promoting exploration of self, content and ideas of others.

c) It makes students to listen and want to share.

d) It promotes acceptance of self and of others.

e) It promotes reflection upon talk and the thinking associated with the talk.

In elaborating upon talk as a tool for collaborative thinking, it was clearly evident from past experiences that we had utilized many of the strategies in our classroom. What made this better for us was that we consciously and openly discussed and reflected upon the use of talk as a tool for collaborative thinking. By raising talk to a conscious level, all of us became a collaborative culture of learners, or a collaborative community of learners. Talk, then became the key element in the collaborative process.

In our observations of the children’s talk, the following emerged:
Empowering teachers and students 19

a. The children became less critical of each other (at a personal level) and were able to react critically to the ideas presented through debate, discussion, and in their journals.

b. Children were able to use talk to resolve conflicts. Conversational exchanges were lengthened and could be used to solve problems without giving up and short circuiting the exchanges.

c. Children were required to explain, elaborate, justify, disagree, prove or show with manipulatives how they got their idea. This dialogue promoted more meaningful work.

At the onset of the study, children were not as positive about collaboration as we would have anticipated. Children commented that there were too many arguments, interruptions and generally did not listen to each other.

As the study progress, comments changed to:

"Everyone pitched in"

"Got more ideas - everyone got a chance to talk"

"Other people listened to me"

"Hear other ideas"

"Make better ideas with more people"

"Negotiated. Take more turns"
As children took more ownership of the talk. The teacher's role changed to being more facilitative and less directive. As Ian said, "We just want you to be there if we need you."

Children could now use talk in more productive ways: to reflect, to analyze, to synthesize, and to problem solve. In adapting what Jaggar and Smith-Burke (1985) have generalized about language learning we could say,

"Language Learning (in this case, talk as a vehicle for learning) is social and collaborative. Children acquire language in meaningful interactions with others who provide models and support their learning by responding to what they are trying to say and do, rather than to the form (p. 4)." In other words, talk is a powerful tool for helping children work together to make meaning.

4. The Question of Gender

Generally, in classes of 8-10 year olds, groupings are along same-sex lines. That is, girls work with girls and boys work with boys. Sometimes teachers mix the sexes in order to allow for cross-gender effects to influence discussion. Basically, however, when given choice, the foregoing pattern of same sex group membership prevails.

Within this study, when children had internalized collaborative strategies, the tendency was for children of either sex to choose groups using different criteria. However, groups within this new framework for action were selected on the basis of need, that is, in terms of what could be accomplished in a group, and what was desirable in a group.
member. Now, instead of using same sex as a criterian for group membership, new and innovative relationship could be formed. As one girl said, "I never realized there were other colours. Boys showed me dark shades of colour where before I only saw light colours.

**Implications for Instruction**

1. **Demonstrations**

   Children need to have the collaborative process modelled for them and/or significant others (parents, aides, support staff, administration). Both positive and negative aspects of this process need to be demonstrated for them in order for children to sort out what works and what doesn't work. In modelling the literacy activity "Say Something" (Harste, Burke, & Short, 1988), the teachers helped the students in the class to "select, interpret, organize and re-orient their knowledge of how to talk about a story they had listened to could be more productively achieved." In the demonstration, they saw both positive and negative kinds of talk. As a result, their own talk in groups become more literate.

2. **Talk**

   The language of collaboration needs to be inculcated in young children. That is, teachers need to use collaborative talk with their students, students need to be immersed in a collaborative activity that facilitates the full range of talk, uses and purposes. Harris' (1990) description of the use of teacher/student talk through what she calls "the collaborative conference" is a helpful example here. Her technique is a familiar one where students are given the opportunity to talk in a truly collaborative way with their teacher.
through the teacher/student conference. This one-to-one conversation, the collaborative dialogue between teacher and student, can be empowering to both the student and his/her mentor in that it gives each individual the chance to resist, to struggle, to gain new insights into the writing and into each person's writing persona.

3. Gender Issues

Teachers' direction is needed to ensure that collaboration is not restricted to same sex arrangements. Teacher discussion about the need to collaborate regardless of gender or friendship is needed, especially in the initial stages of teaching the collaborative process. Although gender issues are still at their formative stage here, teachers need to work to ensure that collaborative work in the classroom provides both sexes with the opportunity to learn from each other. Again, teachers will have to provide clear demonstrations of how boys and girls can work effectively to solve problems. Children need also to see how the talk that is used can be both productive and counter-productive.

Concluding Remarks

In our introduction, we suggested that the collaborative process could be used to empower both students and teachers. Teachers, it would appear, are in the ideal position to influence how children will experience literacy and learning in schools. Thus teachers are able to "use their power to inspire children, to help them develop competency in reading and writing, and to understand the role of reading and writing in their lives" (Fagan, 1989, p. 572). Ideally, such a program of literacy empowerment can best be served through the
collaborative process. What seems particularly important here is to recognize that the push for reform in the classroom does not come from outside the classroom. Rather, collaboration can take place most effectively when both teachers and students (and university personnel) recognize that knowledge can and must be shared, and that such collaboration can be one vehicle for enhancing awareness among all parties concerned with children's emotional and intellectual growth.
References


FORMULAIRE D'ÉVALUATION FORMATIVE DU STAGE

L'objet du présent formulaire est d'informer l'étudiant(e) sur son rendement lors de la / des leçon(s) observée(s).

Etudiant __________________________________________
Spécialité _________________________________________
Classe/matière observée _________________________________________
Ecole ________________________________________________
Associée/Conseiller universitaire _________________________________________
Professeur d'accueil ____________________________________________
Dates du stage ____________________________________________

Pour chacun des domaines suivants, évaluez le stagiaire sur les compétences acquises et indiquez si une amélioration est souhaitable.

1. LA PLANIFICATION:


2. LA PRÉSENTATION DU COURS:

3. LES RELATIONS AVEC LES ÉLÈVES ET LA GESTION DE LA CLASSE:


4. LA COMMUNICATION:

Suggestions: [Correction de la langue parlée, écrite. Élocution et prononciation. Rythme du débit. Adaptation de sa communication au niveau de l'élève. Souci de développer le langage correct chez l'élève. Habileté à susciter un engagement émotif face à la langue].

5. AUTRES QUALITÉS PERSONNELLES ET PROFESSIONNELLES:


6. PERCEPTION GLOBALE:

Suggestions: [Enseignement de très haute qualité, vraiment exceptionnel. Enseignement de haute qualité. Enseignement dans la moyenne. Enseignement faible mais réussi].

Date: ________________ Signatures ___________________

Stagiaire
Professeur d'accueil
Associée/conseiller universitaire