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Montgomery Innovative School Project

*A School-Wide Plan for
Instructional Improvement*

Part I: 2000-2001

Part II: 2001-2002

Montgomery School Teaching Staff

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Montgomery Innovative School Project:

A SCHOOL-WIDE PLAN FOR INSTRUCTIONAL IMPROVEMENT, 2000-2001

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Executive Summary

This action research study was conducted by the teachers of Montgomery School. The school contains K-8 classes, has a population of 224 students and is part of the Saskatoon Public School Division in the province of Saskatchewan.

The primary research questions were:

1. What do teachers need to know and do to become proficient in applying cooperative learning instructional strategies as part of their repertoire of teaching skills?
2. How do we organize instruction using an integrated approach to presenting the curriculum?

The secondary research questions were:

1. What instructional strategies support an integrated approach to presenting the curriculum?
2. What methods of planning and student activities are successful?
3. What out-of-school experiences most strongly support our instructional plans?
4. What criteria are most useful for selecting the “best place” (classroom or out-of-school experience) for instruction?
5. What academic and social effects result from these instructional plans?
6. What problems arise in our day-to-day work as a result of these attempts to improve instruction and what solutions are found to manage the problems?
7. What do students and parents think about the effects of cooperative learning and integration of the curriculum?

Initial professional development sessions were provided to teachers to ensure a basic understanding of cooperative learning and interdisciplinary instruction. Teachers were organized into “pods” of two to five teachers in grade alike groups. Each group used the research questions to guide their inquiry.

The key findings of the study were:

1. Collaboration among teachers results in teacher feelings of accomplishment, confidence and motivation to try new instructional strategies. In short, the time to meet in small groups and focus on improving instruction was highly valued.

2. Students' collaborative and social skills gradually improved as they participated in cooperative learning experiences.
3. Energy from the collaborative group work carried over into teacher's individual planning.
4. Students responded very positively to interdisciplinary teaching activities. Teachers developed positive attitudes toward the value of interdisciplinary approaches.
5. Teachers found that taking small steps toward improving their learning resulted in greater satisfaction and professional growth.
6. Finding resources to support interdisciplinary learning was very difficult.

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Chapter One

INTRODUCTION

This project originated from teachers' discussions and development of a school mission and set of belief statements developed by the Montgomery School Teaching staff in 1998-99 (see Appendix A). At the core of this initiative was the desire to collectively improve teaching and learning. An extension of this process resulted in the development of a framework for instructional improvement that would provide a focus for teachers as we sought to improve our instructional practice (see Appendix B).

Saskatchewan Education (Instructional Approaches, 1991) challenges teachers to build a broad repertoire of teaching methods. Although there was great variation in knowledge and skills among the staff regarding cooperative learning methodology and planning for instruction using an interdisciplinary approach, the staff preferred to work together. Considerable groundwork was done in 1999-2000 to ensure that all staff were committed to this initiative and were willing to take the risks and make the extra effort that this approach to school improvement would require.

PURPOSE

The intent of this research project was to involve the entire Montgomery School teaching staff in seeking answers to several primary and secondary questions.

The primary research questions were:

1. What do teachers need to know and do to become proficient in applying cooperative learning instructional strategies as part of their repertoire of teaching skills?
2. How do we organize instruction using an integrated approach to presenting the curriculum?

The secondary research questions were:

1. What instructional strategies support an integrated approach to presenting the curriculum?
2. What methods of planning and student activities are successful?
3. What out-of-school experiences most strongly support our instructional plans?

4. What criteria are most useful for selecting the “best place” (classroom or out-of-school experience) for instruction?
5. What academic and social effects result from these instructional plans?
6. What problems arise in our day-to-day work as a result of these attempts to improve instruction and what solutions are found to manage the problems?
7. What do students and parents think about the effects of cooperative learning and integration of the curriculum?

OBJECTIVES OF THE STUDY

As an outgrowth of this process, we developed a set of principles that we were committed to applying to our teaching. We called this initiative the “Montgomery Innovative School Project”. The ideas behind this project are summarized in Appendix B and form a framework for instructional improvement. These plans were presented to the Administrative Council of the Saskatoon Public School Division in December of 1999. This project received their unanimous and undivided support.

The McDowell Foundation research grant enabled us to support the following goals:

- To provide teachers with the necessary time needed to support their learning related to the above research questions.
- To facilitate the opportunity for teachers to work together in small groups (two-three teachers).
- To collectively seek answers to the guiding questions, plan together, observe one another, analyze feedback from students and parents, and support one another’s learning.
- To develop one model that may be helpful for other schools to follow in planning for school-based instructional improvement and educational change.
- To evaluate the process and outcomes of this approach to school improvement.

DEFINITION OF TERMS

To assist the project participants in developing a common language associated with the purposes of this project, we adopted specific definitions for cooperative learning, integrated and out-of-school education experiences. These are briefly defined in the following sections.

COOPERATIVE LEARNING

For the purposes of this study, we adopted Johnson, Johnson and Holubec's (1994) definition of cooperative learning. Cooperative learning instruction has both academic and social objectives and it is composed of five essential components:

1. Face to Face Interaction – heterogeneous groups are organized so communication occurs easily and naturally.
2. Individual Accountability – success of the group activity is dependent upon the contribution of all group members, and each member is accountable for completing a task.
3. Collaborative Skills – a social skill is identified that will be the focus for each member.
4. Positive Interdependence – each group completes one task and shares resources or roles. All members receive the same reward for achieving the task.
5. Group Processing – the group assesses their work and the development and use of the collaborative skill.

INTERDISCIPLINARY LEARNING

One of the problems that we needed to grapple with early on in this project was to develop a common understanding of the term “integrated learning”. It was evident from teacher meetings and discussion that this term had different meanings for everyone. As a result of these discussions and professional reading, we chose to change our focus from integrated to interdisciplinary learning. Interdisciplinary learning is defined as:

A knowledge view and curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience (Hayes-Jacobs 1989, p. 8).

Whereas, integrated approaches:

Call for the complete dissolution of subject and discipline boundaries with a focus on the common themes, strategies, and skills students need to address ‘real life’ issues and problems. Student ownership of the curriculum is considered essential (Erlandson 2000, p. 4).

Our goal in this project was to begin, as a whole group of teachers, to move from a discipline based approach in presenting the curriculum, to one that stressed connections between the disciplines. The integrated approach, although laudable, was too large a change to attempt at this time. It was also important that we identify a phrase that would be easily understood by teachers, students and parents for the purpose of clarity. As a result, we chose to use the “connecting the curriculum” rather than saying “interdisciplinary learning” to avoid the use of educational jargon.

OUT-OF-SCHOOL EXPERIENCE

We believe that teachers determine what is best taught in the classroom and what can be best learned through experience dealing directly with native materials, the constructed environment and life situations outside the school. Any instructional activity that is located in a space other than a “regular” classroom, hallway, Library Resource Center, gymnasium or school grounds and that has an instructional focus that is directly linked to the teaching of curriculum objectives can be considered an out-of-school education experience. These activities might be short (30 to 60 minutes) activities like teaching orienteering skills on the school campus, tending a school garden or sketching the creative playground as part of a study in perspective. Or, such experiences can be longer activities such as a half-day trip to the Western Development Museum to study the history of transportation, a flora/fauna study at a local wilderness area or extended trips, e.g., a canoe trip that has multiple goals of developing paddling, camping and student leadership skills.

Chapter Two

LITERATURE REVIEW

The intent of this section is to provide a brief review of professional literature that was important for the purposes of this study. It is not meant to be an exhaustive review of current literature. For a review of the literature related to integrated and interdisciplinary learning the reader is encouraged to examine chapter two of Erlandson's (2000) thesis on integrative curriculum.

INTERDISCIPLINARY APPROACHES

Hayes-Jacobs (1989) reports that interdisciplinary teaching is an effective way of helping students to manage large amounts of information, providing a more seamless and natural school day, and offering students experiences that link learning with real-life issues and problems. Jacobs outlines two pitfalls which teachers may encounter when learning this approach – the “potpourri” and “polarity” problems. The potpourri problem is evidenced in interdisciplinary units which contain small bits of information from each discipline but lack depth, focus and a developmentally appropriate scope and sequence. The polarity problem exists when educators view interdisciplinary and subject areas as an either/or polarity. This problem manifests itself in a curriculum approach that lacks clarity. Jacobs recommends that there is a need for both interdisciplinary and discipline-field perspectives in curriculum design. To avoid the above problems, Jacobs suggests that effective interdisciplinary programs must contain: 1) a scope and sequence, an emphasis on the development of thinking skills, objectives for and an assessment of the affective domain and a well thought out evaluation plan; as well as 2) discipline-based and interdisciplinary experiences. Educators are challenged to choose from a continuum of design options (see Figure 1) as a planning tool for their program.



Figure 1: Continuum of options for content design (Hayes-Jacobs 1989, p. 14).

In designing effective interdisciplinary curricula, Jacobs points to specific student needs that teachers should attempt to meet:

- Providing a variety of curriculum experiences.
- Teaching students meta-cognitive skills and exploring questions like “What is knowledge?”
- Involving students, whenever possible, in the development of units of study.

CONSTRUCTIVIST THEORY

Inherent in interdisciplinary and cooperative learning, and out-of-school experiences is the theory of constructivist approaches in instruction. This theory stresses student construction of meaning and an increasing emphasis, with age, on individual responsibility for learning. This theory is evident when teachers and students collaboratively plan learning opportunities (such as those provided in cooperative learning) and hands-on learning activities (Jensen 1998) or authentic learning experiences (Caine & Caine 1991).

COOPERATIVE LEARNING

There is extensive evidence in the professional literature that demonstrates the positive effects of cooperative learning. Among other outcomes, Johnson, Johnson and Holubec (1994) report that cooperative learning helps students develop collaborative skills for working with others and assists students in developing positive attitudes towards racial or disabled minorities. Our goal in this research project was to learn to be proficient in the use of cooperative learning as one of many useful instructional strategies.

One of the most valuable resources that we utilized was Bennett, Rolheiser-Bennett and Stevahn’s (1991) publication, *Cooperative learning: Where heart meets mind*. The benefit of this resource was its practical and teacher friendly suggestions of how to apply a strategy in the classroom.

OUT-OF-SCHOOL EXPERIENCES

There was a general feeling among the staff that we could better learn to utilize the natural and human-built environment as a setting for instruction. The Saskatoon Public School Division has long supported out-of-school experiences and consequently developed a “Concept Plan for Out-of-School Experiences” in 1989. The local mandate given to teachers was to legitimize the use of space, other than those provided within the confines of a school building, in order to more effectively support instruction. Ideally these opportunities would provide students with “hands-on” experiences and involve them in intimate and challenging ways with the environment surrounding the school, in the community and throughout the province.

Support for such experiences is found in brain-based learning (Caine & Caine 1991), constructivist theory, experiential education, outdoor education and the provincially mandated curriculum (Saskatchewan Education, 1991).

Chapter Three

METHODOLOGY

The purpose of this chapter is to explain how the research project was organized, managed and implemented. The first section presents the methodology used while the methods of data gathering and analysis conclude the chapter.

In the beginning stages of our action research, teachers met as a large group in late August 2000. At this meeting we read the following articles:

- “How to use action research in the self-renewing school” (Calhoun 1994);
- “The growing need for interdisciplinary content” (Hayes-Jacobs 1989);
- “Design options for an integrated curriculum” (Jacobs 1989); and
- “The interdisciplinary concept model: A step-by-step approach for developing integrated units of study” (Jacobs 1989).

We discussed these articles as a large group, which enabled us to have a common starting point. In the afternoon of the first day, we met in grade-alike pods to make our year plans for McDowell research. Our pods were defined as “grade-alike teachers in a group”. Kindergarten and grades one to three teachers were in pod one. Grades four/five and five/six teachers were in pod two and grades six to eight teachers were in pod three. The librarian and French teachers were grouped in pod three, and the music teacher, resource teacher and principal were grouped in pod two. We set our schedules for the first four months and each pod arranged its meeting dates for two half days a month. The members of the research coordinating team led the pods and these pod team leaders compared the dates of the three pods to make sure there was no conflict of meeting dates. That is, no two pods could meet at the same time. We felt that too many substitute teachers in the school at one time would be overwhelming for the students.

Typically a pod meeting consisted of brainstorming, questions, comments, concerns and discussion. As a whole group, we discussed the research questions at the beginning of the year. At each pod meeting, these were referred to and teachers’ thoughts were recorded on an ongoing basis. Minutes were taken and teachers were encouraged to provide self and group reflections. One of the system’s instructional consultants occasionally attended the individual pod meetings. Her role was to teach us instructional strategies with which we were unfamiliar, as well as to help gather resources. Meetings were generally held in the school, but on occasion we met at the Gathercole Building for easier resource access.

In January we scheduled more meeting dates until the end of April. We continued to meet two half days per month concentrating on specific pod goals. We evaluated our progress through anecdotal records, reflection and answering the research questions. By April each pod had data from the beginning, middle and end of the research. We surveyed our parents and students on their opinions of our research

to date. In March a form was created for grades two to four (see Appendix C) and one for grades five to eight (see Appendix D) to determine overall opinions on cooperative learning. The results were tabulated and conclusions were drawn for this report. The parents of two families per classroom were randomly selected. They were provided with a different survey from the students (see Appendix E). The parents were given time to reflect on the questions before an actual telephone interview. Interviews were completed during the second week of May by the team responsible for the completion of the final report. These parental results were also included in the results of research question 9. Four teachers were given writing days in May and June to complete the final report for the McDowell Foundation.

DATA ANALYSIS

DATA FROM EACH POD

The writing team gathered the data from each pod. We divided the questions into three sections. Three members of the writing team read and summarized three questions each. We recorded the summaries in the *Results* section of this report. Our results were confirmed first by our writing team and then by the entire teaching staff. Changes were made accordingly.

STUDENT DATA

A student survey was distributed to each classroom teacher. The results of each class were given to the principal and he recorded verbatim the comments and tabulated the results. These were given to one of the writing team members who summarized and recorded the data for question eight in the *Results* section.

PARENT DATA

The writing team members wrote the parent survey. Four team members collected the data. At a writing meeting we discussed the results. One of the members summarized and recorded these results under question 9 in the *Results* section.

Chapter Four

RESULTS

This chapter is divided into nine sections. Essentially we answered each of the primary and secondary questions. Each question is stated and the results of our findings are summarized in the following section.

1. WHAT DO TEACHERS NEED TO KNOW AND DO TO BECOME PROFICIENT IN APPLYING COOPERATIVE LEARNING INSTRUCTIONAL STRATEGIES AS PART OF OUR REPERTOIRE OF TEACHING SKILLS?

In order to become proficient in applying cooperative learning instructional strategies to our repertoire of teaching skills, we need to know a definition, its purpose, appropriate methodology, the curricula, class characteristics, the time and effort we could commit, complementary evaluation strategies and availability of resources.

As we progressed through our research, we found that we were operating from different definitions of cooperative learning. This may have been partially due to the change in staffing from the time of grant application, but also due to personal interpretations of the cooperative learning concept. Although we relayed the definition to the staff again in the fall, we still found that our personal interpretations affected how we approached cooperative learning.

We found that we needed to know the purpose for using cooperative learning. In order to use cooperative learning within our instructional strategies we needed to know what the benefits were. Although we were willing to risk and try different teaching strategies, we did find that we needed affirmation that this type of strategy had positive learning outcomes. We found that there was a lot of work involved in using such strategies, and knowing that the students would benefit was important to all of us.

Once we had a common definition and our purpose was in place, we found teachers needed to know the skills appropriate for cooperative learning. Tied in with this, we needed to thoroughly know our curricula so that we could ensure the students were learning the necessary components. We also found that we had to use cooperative learning skills with the units that suited this type of strategy. Although some of us were learning the instructional strategy, we found that we could not use the strategy simply for the sake of learning it. The strategy had to suit the content and the foundational objectives of curricula. Additionally, we found through trial and error that we needed to start students off in small groups of two and progress to larger groups once success was demonstrated.

The teachers in the primary grades found that different skills were emphasized in the lower grades than in the higher ones. For example, in kindergarten one of the foundational objectives is for all children to share, whereas in grade two

the children want to do all the skills of cooperative learning. We did however find that regardless of the students' skills and ability levels, students were able to learn together.

One of the most important factors we found was that we needed to regularly discuss the successes and failures of our cooperative learning with each other. While we were all experiencing joys and defeats, we needed to share in order to learn from each other. Regardless of the size of these successes, we needed to celebrate them. Our accountability to each other, the practice time and our reflection time all contributed to these successes and defeats. In some form or other, each of us took a risk in applying cooperative learning in our classroom. With regular discussion and honesty, our comfort levels with this risk strengthened and flourished.

Through all our academic endeavors we found that the characteristics of the class were instrumental to the success of the instructional strategy. The class size, student behaviors and social skills of the class affected the use of cooperative learning. The smaller numbers in the younger classes were conducive to successful cooperative learning experiences. On the other hand, the larger class sizes in the older grades added to the difficulty of implementing cooperative learning in the classrooms, and additionally, the behaviors of the students affected the success of cooperative learning. Although we found that all classes were capable of cooperative learning, the timing was very important. Teachers needed to establish order in their classrooms before trying to implement cooperative learning.

Time and effort played important roles in the degree to which cooperative learning worked. We all differed in how much time and effort we were able to dedicate to this project. Due to the various family and personal commitments on staff, we found that common planning time during the school day was desperately needed.

One of our most difficult problems was how to evaluate students. We found that we needed to have a sufficient number of evaluation strategies that worked for cooperative learning.

Another problem we encountered throughout our research was the need for resources. We found out that many of us did not know what we had in the school or what was available throughout the system. To be successful in implementing cooperative learning, knowledge of the school and system resources was necessary.

2. HOW DO WE ORGANIZE INSTRUCTION USING AN INTERDISCIPLINARY APPROACH TO PRESENTING THE CURRICULUM?

If teachers have an interdisciplinary approach as part of their "world view", they are more willing to use it in teaching. For example, the teachers of kindergarten and grades one to five have interdisciplinary units built into their repertoire. The grades six to eight teachers traditionally focus on separate subjects and found teaching from an interdisciplinary perspective more difficult. Middle years teachers tend to be more subject-specific, whereas

primary teachers are generalists. The middle years teachers used this approach as well but it was more challenging for them. Teachers who knew their grade curricula very well were able to make connections easily.

Most teachers found that mathematics was the most difficult subject to teach using an interdisciplinary approach because mathematics had a logical progression that made it difficult to link with other subjects. An interdisciplinary approach was easier at grades six to eight because the basic skills had been taught in the younger years.

3. WHAT INSTRUCTIONAL STRATEGIES BEST SUPPORT AN INTERDISCIPLINARY APPROACH TO THE CURRICULUM?

We found that it is important to support the multiple intelligence theory and use a variety of instructional strategies to support interdisciplinary teaching. We also found it was important to involve as many teachers as possible in the process. For example, our school has itinerant French and music teachers. It was beneficial to get these teachers to also model the approach and use a variety of instructional strategies.

4. HOW DO YOU SELECT INSTRUCTIONAL STRATEGIES TO SUPPORT LEARNING OBJECTIVES? WHICH ONES STAND OUT AS SUCCESSFUL?

Rather than find that one particular strategy being more successful, we found that a variety of instructional strategies should be taught to support the foundational objectives of the curriculum. However, there were a number of underlying factors that had to be addressed when choosing the “best” instructional strategy.

Teachers had to be familiar and comfortable with the instructional strategy before teaching it to the students. Becoming comfortable with the strategy involved educating themselves in the methodology, gathering resources to support the strategy and making sure the strategy fit with the objectives. We found it was also vital that the teachers took a look at the classroom dynamics to ensure the children were academically and socially ready to become involved with the teaching of a new strategy. In retrospect, it was also important that teachers took risks and challenged themselves to go beyond their comfort level to try new strategies. We found that a balance between comfort and risk was important.

When selecting instructional strategies to support learning objectives, it was also important to select a variety of strategies that engaged student interest and supported multiple intelligences. We found that most students were successful when given a variety of ways to do a task. Most students also learned better when the activity was a hands-on learning experience that kept them active.

Availability and cost of resources were also key factors when selecting instructional strategies. Teachers looked at what resources were available to

them in their school setting and how these resources could support or complement the strategy being taught. Teachers also looked at what resources were not available and how they could manipulate this drawback so that they could teach the chosen strategy successfully. Teachers had to be aware of all the resources in their school. We found that it was very difficult for new and beginning teachers to teach a variety of instructional strategies until they were aware of the resources available to them. It was extremely important that an inventory was taken of the resources in the school so the resources could easily be found.

It was also necessary to look at the cost of resources when selecting instructional strategies. Teachers had to determine where the “best place” to teach was. In determining this “best place”, it was critical to look at how much money this “best place” cost. Sometimes the “best place” was right in the regular school setting. At other times though, it was more beneficial for the learning of the students to participate in an out-of-school experience. Teachers had to be cognizant of the community’s economic status. For example, we found in our community that, due to larger families, some students could not afford to participate in all the out-of-school experiences. The cost of resources was definitely an important factor to address.

5. WHAT OUT-OF-SCHOOL EXPERIENCES MOST STRONGLY SUPPORT OUR INSTRUCTIONAL PLANS?

Out-of-school experiences were experiences acquired outside the regular classroom setting. These experiences could be local to the school or could be outside the school community. We found that there were numerous out-of-school experiences to choose from in and around Saskatoon. The Water Treatment Plant, Safeway, Beaver Creek and the school division’s computer resource center were a few examples. The criteria we used to evaluate these experiences outlined ones that strongly supported our instructional plans.

We found that some classes were more ready to embark on out-of-school experiences than others. Teachers had to critically evaluate the dynamics within the class to see if the students were ready for an excursion. Any out-of-school experience could be a very valuable learning experience as long as the students could make a connection between what they learned in the out-of-school experience and the instruction in class.

6. WHAT CRITERIA ARE MOST USEFUL FOR SELECTING THE “BEST PLACE” (CLASSROOM OR OUT-OF-SCHOOL EXPERIENCE) FOR INSTRUCTION?

We found that teachers had to do research in selecting the “best place” to help support or enhance their instructional teachings. First, we found it was important to critically evaluate the offered instructional program. The “best place” needed an educational program in place and had to be experiential and active. Students love to learn from hands-on experiences. The instructional program needed to follow the learning objectives and had to be applicable to the curriculum. The “best place” had to demonstrate the concepts the

students were supposed to attain. We found that the “best place” had qualified instructors who were experts in their field. These instructors talked at the students’ levels and were responsive to the age group they were instructing.

Second, we found that in order to determine the “best place” for instruction, teachers had to be realistic with respect to cost. Some concepts were better taught outside the school setting; however, money was also an issue. Teachers had to be very selective when determining whether the out-of-school experience was the “best place”. Some teachers found it was necessary to find alternative methods for transportation and funding. Teachers had to be resourceful and creative in those areas. For example, some teachers in our school used bicycles and parent drivers as alternative transportation methods.

Third, we found that teachers looked at how much time was spent outside the classroom and if the experience was worth the time. There was not enough teaching time to cover all the minutes required in the curriculum; therefore, experiences outside of school had to be carefully selected.

7. WHAT ACADEMIC AND SOCIAL EFFECTS RESULT FROM THESE INSTRUCTIONAL METHODS?

The interdisciplinary approach to teaching the curricula allowed the students to become more involved in their learning. They found the presentation of the materials was more interesting than the traditional methods because they could see the connections of the lesson and other learning to real life. They enjoyed the freedom to pursue areas of special interest to them. They were given opportunities to present their information in a variety of ways, which appealed to their different abilities. Without tight time restrictions imposed by subject schedules, they were able to undertake more adventuresome activities.

We found the students responded well to cooperative learning. With this method, the students were attentive and their level of participation was high. By rearranging the cooperative groups, the students were interacting with all of their classmates, not just their friends. They agreed with the teachers that this was a positive feature of this method of instruction. As one student said, “Not only do you have more fun, you can get more work done.”

Cooperative learning gives the teachers a way of discussing social interaction and group dynamics, which are part of our everyday lives. By assuming the different roles and responsibilities assigned to them, the students were able to further their understanding of these social skills. As the year progressed, we noticed the students were showing more tolerance of others. One student said, “I like that you get to know the people better and work with them better.” Some special needs students responded very well to this method. Others found it difficult to work under these conditions.

While there were many positive effects from these instructional plans there were also some difficulties. We still had some students, particularly in the older grades, who were hesitant to participate in the cooperative learning activities. They preferred to work independently. The teachers also found it more difficult to evaluate the students’ work when it was completed as a group.

8. WHAT PROBLEMS ARISE IN OUR DAY-TO-DAY WORK AS A RESULT OF THESE ATTEMPTS TO IMPROVE INSTRUCTION AND WHAT SOLUTIONS ARE FOUND TO MANAGE THE PROBLEMS?

We identified the two primary problems of time and timing. Teachers found it takes time to understand all that is involved in using cooperative learning as an instructional method. Many teachers had to learn more about the social skills to be developed and how to introduce them to their students before they could begin. We spent time looking at the curriculum to see which foundational objectives would be best attained through cooperative learning experiences. We found in the situation where students had relatively little experience with cooperative learning, that it was important to start in groups of two. As the students became more receptive to this style of learning and more compatible in their roles, the group size could be increased to four. Some teachers found it took more time for students working in cooperative groups to complete an assignment. Although student involvement was high and the product was interesting, there was some concern about covering all that was outlined in the curricula.

The interdisciplinary approach to instruction demands more time from the teachers especially at the beginning stages. The teachers must have a good knowledge of the curriculum they are required to teach so they can draw from different areas as they develop their units. It also takes time to identify and locate the necessary resources at an appropriate grade level.

To meet these demands, we all, at different times, depended on and thrived upon the support we received from our colleagues. When planning an interdisciplinary unit, our excitement rose as we put our ideas together. We were capable of doing many more “hands on” activities because we shared our interest and expertise. We also shared the organizational tasks that were incurred.

Along with support, we also felt some accountability and responsibility to our colleagues to try these instructional methods. We enjoyed the opportunity to reflect on our experience and to push ourselves further.

As we introduced the students to cooperative learning strategies, it was beneficial to help them understand why these strategies were important. The primary children needed only a brief comment but the older students were interested in learning more about the application of the skills into their own lives.

It was important for teachers new to the school to take time to get to know their students and the school environment before they started trying new instructional methods. If they moved slowly, they experienced more success.

9. WHAT DO STUDENTS AND PARENTS THINK ABOUT THE EFFECTS OF COOPERATIVE LEARNING AND INTEGRATION OF THE CURRICULUM?

As shown in the student surveys, most of the students appreciated the opportunity to discuss their opinions with their classmates during the cooperative learning activities. They came to know more about the students outside their original group of friends. When the group members worked well together, they felt they could accomplish more than working independently. They found it valuable to be able to discuss their work and help each other as problems arose. They did not always need to wait for the teacher's assistance. Many students also described the cooperative learning activities as "fun". They really liked to work and learn with others.

The most common problem with cooperative learning activities identified by the students was the perception that some students did more work than others did. A few students expressed frustration that the work was not finished as quickly as it might have been if they had been working individually. Some of the students would have liked to choose their group members. As the grade two students looked back on the year, they realized that they had learned a number of group skills such as taking turns, sharing and decision making. They were proud of their accomplishments.

To elicit parental feedback in our community, we sent a letter to two families in each classroom. These letters (see Appendix E) asked the parents to think about cooperative learning, connecting instructional experiences and out-of-school experiences as they pertained to their child.

As a whole, parents felt cooperative learning was beneficial to students. It provided an opportunity for the students to develop the social skills needed to thrive in "real life". The parents felt their children were more motivated to work hard in the group setting. They said their children were enthusiastic about the projects and wanted to come to school. The parents liked to see the students busy working in groups when they came to visit.

The parents emphasized the importance of changing the cooperative groups periodically. In some cases when a student was paired with a weaker partner, the stronger partner did most of the work. The way a student interacted in their group depended upon the characteristics of the others involved. They needed the opportunity to work with many different people. For example, there were some students who did not get along well. Parents appreciated that teachers found that these combinations were best changed quickly or avoided altogether.

Cooperative learning was viewed as one of the many valuable instructional strategies used by the teachers but that it should not be used exclusively. One parent felt the concept was great but it did not meet the needs of her daughter at that point. Another parent expressed a desire to see the students continue writing subject-specific tests for reporting purposes. Other parents noted that the success of the cooperative learning experiences depended to some extent on the class size, student dynamics and teacher expectations. Some parents noted that many of the lessons had a visual component, which appealed to the visual learners and provided reinforcement for all students. Parents said the students found the activities in the interdisciplinary

units to be stimulating. Students were able to retain more of what they learned because of the high interest. The parents noted that the students developed stronger speaking skills because they were expected to make more presentations.

Overall the parents provided very positive feedback about our efforts to connect to learning from different subject areas. One comment we heard was:

Wonderful! I'd like to see more. A few more years like this would be great!

The parents we spoke to were in complete support of the out-of-school experiences. They described them as:

Tremendous; The best thing.

Or, as one parent stated, “anytime you can link a hands-on experience to the classroom, it is beneficial.” The parents were adamant about maintaining these out-of-school experiences. As one parent concluded, “Montgomery School is fantastic on so many different levels, out-of-school experiences are so much a part of it.”

Chapter Five

Our conclusions are presented through the final reflections of each of the three pods. Recommendations determined by this year's research at Montgomery School follow the conclusions. The final section in this chapter suggests areas for future research.

CONCLUSIONS

POD ONE

The teachers in the kindergarten to grade three pods agreed that our participation in this research project was beneficial for us in many ways. We always looked forward to meeting with each other to share our progress, our frustrations and our questions. We left each meeting with a feeling of accomplishment and a sense of excitement about our upcoming activities. The companionship and trust that quickly developed between us was an essential factor in our successful implementation of cooperative learning. Together we learned more about cooperative learning and discussed what it did not entail. We were each responsible to try some lessons in our class and bring our experiences to the group. Reflecting on our experiences in this supportive environment was another important step in our learning. We could share our stories, laugh at ourselves and explore new strategies and techniques to improve our teaching. As we became more familiar with cooperative learning we incorporated it into our lessons more often. We gained confidence as we gained experience.

As we presented more cooperative learning lessons, we noticed the students' social skills were improving. The students learned to respect all of the members of their group for the contributions they could make. Students with a wide range of academic abilities could work well together. Students, who were hesitant to participate in their group at the beginning of the year, gained confidence as they realized their ideas were acceptable to the group.

We were very enthusiastic about our interdisciplinary unit on Mexico. We were able to share our resources, experiences and time so we branched into areas we would not have explored on our own. Our energy was high because we were all excited about what we were doing. It was much more fun to work together.

This energy carried over into our individual planning. We all continued to use interdisciplinary units to some extent throughout the year. The kindergarten teacher felt this was an expectation for kindergarten instruction and, therefore, she had broad experience in this type of planning. As we moved through grade one to three, we found the subject-specific guidelines were increasingly demanding. This proved to be a challenge for us when planning the interdisciplinary units because it was harder to maintain the integrity of our unit while covering all of the provincially set objectives.

The students responded very well to the interdisciplinary unit we did together. They enjoyed a wide variety of activities presented through a range of teaching methods. We often worked with another class so the students had an opportunity to work with different people and grade levels and strengthen their relationships with them.

Pod Two

The reactions to the success or applicability of this research varied in this pod as much as its members' roles varied. Staff in this group included two classroom teachers, the principal, the music teacher and the resource room teacher. While all staff felt the research was fairly successful, the applicability for individual staff members varied. For example, the classroom teachers needed the pod meeting time to plan cooperative learning lessons and units. (Extensive personal time outside these meetings was also used to accommodate the needs of each individual teacher). Several of the pod meetings had only the two classroom teachers in attendance. Both these teachers realized that two people in a pod were too few. The two teachers were at different stages in their understandings and implementation of cooperative learning. The result was that both teachers had different needs and these needs were not necessarily met.

The resource room teacher found that her time was not well spent in pod meetings as her lessons applied more to individual student programs and needs. Although she was in the classroom for one out of five days, she found that her class time was consumed with behavior management and trying to deliver the curriculum within a limited time span. The principal found pod meetings to be a positive opportunity to connect with the teachers. His attendance at these meetings and in classrooms provided him with non-threatening ways to meet with teachers and to provide teaching demonstrations and peer coaching. The music teacher did not attend any of the pod meetings but she did stay informed of the group progress.

Most of the pod members learned something from the research experience. For example, one teacher commented that if not for this opportunity and support from fellow teachers and administration, she would not have discovered the value of an interdisciplinary approach to learning. It influenced and shaped how she will teach in the future.

Pod Three

When thinking about the initial planning for an interdisciplinary unit, we learned it is important to start small. We, as a middle years pod, started off too big. We planned a medieval unit, across three grades and the curriculum. We should have concentrated on a few subjects. At first we found our theme was too general and it was hard to narrow it to a specific topic. In the middle years, starting from one or two guiding questions was a more effective way of planning.

The planning meetings gave all of us the opportunity to share knowledge and resources and to challenge each other's thinking as we developed a common goal.

It is important that each member in the pod is organized and all participants are committed to the same or similar amount of work and input. It is hard to achieve a common goal and work together if everyone does not pull his or her weight with the project.

The meetings were a channel for creative expression and brainstorming. The time to meet with the teachers in pods was highly valued. We all got to know each other on a more personal level. Volumes of ideas were developed at the meetings and many teaching techniques were learned that appealed to the various learning styles of children.

The teachers in our pod participated in the meetings on various levels. The French itinerant teacher would have liked to attend more meetings; however, with his busy schedule between two schools, it was basically impossible. In discussions, this teacher said, "The French curriculum is designed for a lot of cooperative learning and other various teaching methods, so students were well geared." The French teacher did not have the desired level of involvement in this research project as he would have liked. The Teacher Librarian would have liked to attend more meetings as well. However, her schedule did not allow this. She said that, "the teacher-librarian's mission statement includes the use of resource-based learning, research skills, appreciation of literature, as well as cooperative planning and teaching within the school", which is conducive to an interdisciplinary approach. Halfway through the year, a teacher had to go on sick leave and a first year teacher took his place. The first year teacher felt that the meetings were a learning experience; however, he had more practical needs at the time. We all felt that teachers should be comfortable with the subject matter before attempting an interdisciplinary approach.

One of the biggest problems was finding resources. For the first year teachers and teachers new to the system, finding resources to support the curriculum is first and foremost on the mind. Lack of resources in following this approach was difficult. Time to plan, finding resources for support, gathering adequate finances, assessing team and members' level of motivation and willingness to work together, and determining appropriate out-of-school experiences are important considerations before planning for interdisciplinary experiences.

RECOMMENDATIONS

The recommendations stemming from our research fall under six categories: time, risk, support, communication, cooperative-learning and out-of-school experiences.

TIME

Everyone agreed that time is needed: time to plan, to learn, to accept and to implement new things. Many teachers spend personal time preparing for classes. However, in order to expect teachers to comfortably accept new strategies or curricula, they need to have time built into their teaching day. This time needs to

be over and above the existing preparation time. Students, too, need to be given time to learn these same approaches. Therefore, teachers need to break the process down into small, manageable steps. These steps are dependent upon the characteristics of each individual classroom. If we want to continue with an interdisciplinary approach to teaching, we will need to be innovative in finding time within our day and schedule to maintain pod meetings. Both teachers and administrators will have to be creative in providing time for teachers during the school day.

RISK

We need to be willing to take risks within our teaching. Although we may all be at different stages of implementing an interdisciplinary approach, we all have to be willing to take a chance on trying new things. Nearly all staff involved in this research found personal satisfaction in connecting the curricula through an interdisciplinary approach.

SUPPORT

Of course, risk is connected to support. If administrative and collegial support is present, risk is easier to attempt. Teachers and administrators need to be supportive of individual needs and places on the continuum of implementing an interdisciplinary approach. For example, teachers initially entering their careers begin at a different place than teachers with years of experience. Or, as we found, a school may have teachers entering the system from other divisions, teachers fulfilling temporary contracts, teachers who had first year status and teachers who were experienced in teaching but new to an interdisciplinary approach. Even with the teachers who were knowledgeable about such an approach, there were differences in understandings. However, regardless of the many differences and circumstances, as long as support for each other and from the administration is demonstrated, we found that much is possible.

The best place for the librarian to be is floating from pod to pod. Her time is best utilized by all the pods rather than being assigned to one group. The music, French and resource teachers, too, should not be assigned to any one group. In order to provide them with opportunities to connect their programs to the classroom curricula and, therefore, make interdisciplinary connections, teachers need to communicate plans and information to them; however, attendance at pod meetings may not be necessary.

In order to keep our administrators current with our classrooms and to encourage their support, we need to invite them into our classrooms on a regular basis. We may want to extend this invitation to parents, too. While the majority of our parents are supportive of an interdisciplinary approach to the curriculum, maintenance of positive public relations is important to the success of our programs. As teachers, we may see the positiveness of interdisciplinary teaching, but we must continue demonstrating patience with parents, students and staff who may show reluctance to accept such an approach.

We all felt that both social and academic goals need to be targeted for an interdisciplinary approach to teaching. As a result, emphasis must be given to both academic and social skills. One without the other does not work. Support must be given to those teachers who may have a difficult classroom in terms of management. Classroom management and discipline problems within a classroom must be attended to before effective interdisciplinary teaching and learning can result. Patience and understanding must also be given to teachers in such situations.

We also need to determine what our internal and system resources are. Effective planning and implementation can be attained especially if we know what the school and system need to supplement an interdisciplinary approach.

COMMUNICATION

Communication between the pods is very important. One possibility is for the pod leaders to consistently share information at a scheduled time in staff meetings. This way teachers can keep up to date on what is happening in other classrooms. This will allow interaction between the pods so more support is possible. All pods should also take time in the fall to develop individual grade plans, which also allow each other and the itinerant teachers to plan units accordingly and to feel like they are a part of the planning process. In short, communication is the key.

COOPERATIVE LEARNING

To maximize success we suggest teachers should begin by teaching social skills, such as listening, 30-cm voices and contributing to discussions, to name just a few. Teachers should have a well-managed classroom before asking students to work together. Start cooperative learning lessons with pairs of students, and then move to small groups as students prove their readiness. It takes practice and does not have to be a part of your instructions every day. What is more important is to progress by moving slowly and not too far outside one's comfort zone.

OUT-OF-SCHOOL EXPERIENCES

Students indicated they highly valued out-of-school experiences and the level of parental support for them was also positive. We believe that out-of-school experiences are a legitimate part of the whole educational program and should be frequently provided. It is time-consuming to locate sites and activities for instructionally based out-of-school experiences but it is worth the extra effort from the teacher, as these experiences involve more of the student's modalities and, therefore, broaden and deepen student understanding. We strongly recommend that school division curriculum committees work with agencies such as civic facilities, museums, parks and businesses to identify educational communities that fit with the foundational objectives of the curriculum.

AREAS FOR FURTHER RESEARCH

The teaching staff at Montgomery School was granted a continuation for this research project for 2001-02. Our research will concentrate on locating suitable resources as well as increasing public support and awareness for cooperative learning and an interdisciplinary approach to teaching.

We recommend that further research explore the following questions:

- How do you effectively evaluate cooperative learning?
- How can we develop a web to show curricular connections between subjects and grades?
- Are there ways to develop these connections?

We also recommend that future researchers develop interdisciplinary resource kits that would supplement the connections between the curricula.

References

COOPERATIVE LEARNING

- Abrami, C. et al. (1995). *Classroom connections: Understanding and using cooperative learning*. Toronto: Harcourt Brace & Company.
- Archibald Marcus, S., and McDonald, P. (1990). *Tools for the cooperative classroom*. Palatine, IL: IRI/Skylight Publishing.
- Bellanca, J. (1990). *The cooperative think tank: Graphic organizers to teach thinking in the cooperative classroom*. Palatine, IL: IRI/Skylight Publishing.
- Bennett, B., Rolheiser-Bennett, C., and Stevahn, Laurie. (1991). *Cooperative learning: Where heart meets mind*. Toronto: Educational Connections.
- Calhoun, E. (1994). *How to use action research in the self-renewing school*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Caine, R. N., and Caine, G. (1991). *Making connections: Teaching and the human brain*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Erlandson, C. (2000). *Voices from the middle years: Students views of integrative curriculum*. Unpublished Master's Thesis. University of Saskatchewan.
- Graves, N., and Graves, T. (1990). *What's cooperative learning? Tips for teachers 'n' trainers*. Cooperative College of California, 136 Liberty Street, Santa Cruz, CA 95060 (408) 429-6550.
- Johnson, D., Johnson, R., and Holubec, E. (1994). *Cooperative learning in the classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Johnson, D., Johnson, R., and Holubec, E. (1994). *The new circle of learning: Cooperation in the classroom and school*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Saskatchewan Education (1991). *Instructional approaches*. Regina, Saskatchewan: Authors.

INTERDISCIPLINARY LEARNING

- Drake, S. M. (1993). *Planning integrated curriculum: The call to adventure*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Drake, S. M. (1998). *Creating integrated curriculum: Proven ways to increase student learning*. Thousand Oaks, CA: Corwin.
- Hayes Jacobs, H. (1989). *Interdisciplinary curriculum: Design and implementation*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Hayes Jacobs, H. (1994). *Integrating the curriculum*. Salt Lake City, UT: The Video Journal of Education.

- The Metropolitan Toronto School Board. (1995). *Getting it all together: Curriculum integration in the transition years*. Toronto, ON: Authors.
- Stevenson, C., and Carr, J. (1993). *Integrated studies in the middle grades*. New York: Teachers College Press.
- Stevenson, C. (1992). *Teaching ten to fourteen year olds*. White Plains, NY: Longman.

OTHER BOOKS OF RELATED INTEREST

- Cole, R. (Editor). (1995). *Educating everybody's children: Diverse teaching strategies for diverse learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Jensen, E. (1998). *Teaching with the brain in mind*. Alexandria, VA: Association for Supervision and Curriculum Development.

Appendix A

MISSION STATEMENT

(ADOPTED IN 1999)

At Montgomery School we are committed to creating and maintaining a safe, challenging, and caring learning community where respect and responsibility guide our actions and where we strive together with pride to be successful.

BELIEF STATEMENTS

We believe . . .

- The school is a safe and caring place
- In the dignity, uniqueness and worth of every person
- The foundation for interaction in the school is one of respect and responsibility
- The purpose of the school is to foster the development of an interactive learning community
- All children, teachers and parents can learn
- Individuals assume responsibility for their own learning
- In quality of work and the joy of effort
- That cooperation among teachers benefits all
- The school should be fun for children and adults
- Meaningful and developmentally appropriate educational experiences help the continuous development of the student.

Appendix B

MONTGOMERY INNOVATIVE SCHOOL PROJECT: PRINCIPLES TO GUIDE INSTRUCTION AND LEARNING FOR 2000-2001

Guiding Principles	What does this mean for teachers?	What does this mean for students?	What does this mean for parents?
1. Academic growth is viewed as the most important aspect of our work.	We plan challenging, motivating and developmentally appropriate learning activities for students.	Students will be engaged in their work, and experience success in learning.	Parents will notice growth in learning and improved attitudes towards school.
2. A commitment to the application of best teaching practices for students.	We continually strive to learn and improve our work as teachers. We apply what we have learned, and reflect on the outcomes.	Students will see the teacher acting as a life-long learner role model.	Parents will be assured that their children receive a variety of the best instructional practices available.
3. We will learn to use an integrated approach in instruction. Common themes or concepts will be taught by using skills from subject areas as tools for learning.	Teachers will plan activities that allow for student choice, emphasize the application of critical thinking and problem solving skills, complement a variety of learning styles, and encourage in-depth study.	Students will be motivated to apply their learning in meaningful (relevant and realistic) ways. Understanding of connections between subjects will be developed.	Parents and other community members will be invited to provide their expertise to assist teachers with some learning activities.
4. Cooperative learning experiences and methods of instruction will be provided as one of many instructional strategies.	Teachers will provide a balance of individual and cooperative experiences for students. Teachers will target the development of student's cooperative work skills.	Classrooms will be organized to support cooperative and individual learning. Classroom desks may be replaced with worktables. This will occur with funding from Central Office.	Parents will notice an improvement in their children's ability to work together with other students.
5. A commitment to teach environmental values.	We will continue to be involved in the Green School Project. Other ways of conserving resources in the school will be explored. We will strive to pack "garbage free" lunches.	Students will be involved in many environmental learning activities.	Students will be encouraged to bring "garbage free" lunches. Parents will be encouraged to try to provide foods in reusable containers. Parents will notice their children are sensitive to environmental issues like conservation of resources.
6. That which can be best taught inside the classroom is taught there, and that which can best be learned through experience dealing directly with natural materials, the human-built environment, and life situations outside the school should be learned there.	All out-of-school experiences will have a direct link to curriculum objectives. Such experiences will be carefully planned and scheduled at times that minimize disruption to other programs. All out-of-school experiences will be designed to enhance and further develop student learning.	Opportunities to practice and refine learned skills will be provided to students in the natural and human-built environment. Students will have "hands on" experiences to assist their learning. Children will see direct application of their learning to assist them in solving problems that are realistic and relevant.	In some classrooms parents will see an increase in the number of out-of-school experiences, in other classes the frequency of out-of-school experiences will remain the same. The cost of these activities will not result in an increase in the annual student fees.
7. A deep level of cooperative planning and work is evident among staff.	Teachers will work together to develop instructional plans and assist one another to become better educators.	Students will see teachers learning and working together.	Parents will see benefits for their children when teachers share their expertise with one another.

Appendix C

STUDENT SURVEY - GRADES 2 TO 4

LIFE IN THE CLASSROOM

Students: Thank you for helping us by completing this survey. We are interested in what you think and will use this information to help provide you with the best education possible!

For each item, circle the symbol that best describes how you feel.

1. How do you feel about sitting at a table?



2. How do you feel about sitting at a desk?



3. How do you feel about working in cooperative groups?



4. What do you like and/or dislike about cooperative learning?

5. How do you feel about out-of-school experiences? (Water Treatment Plant, Diefenbaker Centre, Mendel Art Gallery, Beaver Creek, Canoeing)

6. What do you like/dislike about out-of-school experiences?

Appendix D

STUDENT SURVEY - GRADES 5 TO 8

LIFE IN THE CLASSROOM

Students: Thank you for helping us by completing this survey. We are interested in what you think and will use this information to help provide you with the best education possible!

For each item, circle the symbol that best describes how you feel.

1. How do you feel about sitting at a table? Comments:



2. How do you feel about sitting at a desk? Comments:



3. How do you feel about working in cooperative groups? Comments:



4. What do you like and/or dislike about cooperative learning?

5. How do you feel about out-of-school experiences? (Water Treatment Plant, Diefenbaker Centre, Mendel Art Gallery, Beaver Creek, Canoeing)

6. What do you like/dislike about out-of-school experiences?

Appendix E

LETTER TO PARENT OR GUARDIAN

MONTGOMERY SCHOOL
3229 CAEN STREET
SASKATOON, SASKATCHEWAN
CANADA
S7M 3P1
TELEPHONE (306) 683-7370

April 30, 2001

Dear Parent or Guardian,

We would like to receive your feedback about your opinion of your son's or daughter's instructional activities this year. Please read and think about the questions below.

Between May 2 and 10 we will phone you to ask for your response. Please do not send the sheet back to the school.

Thank you for taking the time to consider these questions and for your anticipated support with this task.

Sincerely,

Mrs. Hlady, Miss Jung, Mrs. Sondresen, Dr. Wipf

1. Cooperative learning is designed to teach students how to work together toward an academic and social goal. How do you feel about your child's experience with cooperative learning?
2. Teachers have tried to provide students with instructional experiences this year that connect the learning from different subject areas. What examples of this have you seen, and how do you feel about these activities?
3. We have tried to provide out-of-school experiences that support instruction. How do you feel about the out-of-school experiences your child may have been part of?

DR. STIRLING MCDOWELL
Foundation
FOR
RESEARCH INTO TEACHING



**TEACHING AND LEARNING
RESEARCH EXCHANGE**

Montgomery
Innovative School
Project

Part II: 2001-2002

Project #89
June 2002

Montgomery Innovative School Project:

A SCHOOL-WIDE PLAN FOR INSTRUCTIONAL IMPROVEMENT, 2001-2002

BY

THE MONTGOMERY SCHOOL TEACHING STAFF

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**PROJECT #89
JUNE 2002**

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Introduction

The action research project entitled Montgomery Innovative School Project: A School-Wide Plan for Instructional Improvement was extended for a second year in 2001-2002. The second year was regarded as an opportunity to sustain the growth experienced by the school staff and extend many of the possibilities the staff had been exploring. Part II was expected to build on the research findings, recommendation and literature review developed in Part I.

Based on the recommendations from our first year of research, we decided to focus on answering two questions:

1. What are the resources that we can use to "connect to the curriculum"?
2. What can we do to keep our parents positively informed about cooperative learning and interdisciplinary teaching?

Also on the basis of last year's recommendations, we divided our teaching staff into two pods by grade levels: K-4 and 5-8. Each pod had four teachers, of whom half were new to the school. The Music and French teachers and the Teacher-Librarian were not part of the pods. The principal attended occasional meetings of both pods. The vice-principal attended the meetings of the 5-8 pod. Pod meetings were held for a half-day once a month, but the two pods never met on the same day. Meetings for the two pods differed depending on the needs of the individual teachers.

The Challenge of Change

Our application for a second McDowell research grant had been based on the belief that most of our staff was returning to Montgomery School. Of course, the best-laid plans do not always turn out as expected, which was the case in our school. Staff turnover was quite extensive in 2001-2002. Over half the teaching staff, including the principal, were new to the school. Our support staff, as well, faced new responsibilities. Although two staff members remained in each research pod who had participated in the initial year of the project, all other staff members had no experience with the McDowell project. As a result, plans for the additional year had to be adapted to meet the needs of the new staff members in the school.

A retreat to an overnight camp at the Brightwater Science and Environmental Centre was a great way to orient new staff to our on-going research. It helped them understand the objectives of the project and plan for the 2001-2002 school year. These objectives were to continue assisting Montgomery teachers to weave cooperative learning and interdisciplinary strategies permanently into their instruction. An orientation was provided on these two teaching approaches. With funding from the McDowell Foundation, Montgomery staff had the opportunity to reflect on their teaching practices and make changes as the project suggested.

Those of us involved in the McDowell project at Montgomery School believe that teacher collaboration is one way to improve practice, and this belief was implemented for all teachers at Montgomery School in the school year 2001-2002.

MONTGOMERY STAFF RETREAT AT BRIGHTWATER

Reviewing our conclusions from the first year of this project, we realized that we would have to get all staff to a similar starting point if the research project was to succeed. So we seized an opportunity of spending 1.5 days at Brightwater, a facility in a natural setting 20 kilometres outside of Saskatoon that is used for science and environmental programs by the Saskatoon Public School Division.

We divided the agenda for our time together as follows:

1. Brief Overview of Our Research Project
2. "Pearls" and Questions
3. 2001-2002 McDowell Research Goals
4. Our Resources
5. Pod Meetings
6. Brief Exchange of Plans

During the brief overview, the vice-principal, who had been part of the first research team, presented a summary of the first year's goals, data and conclusions. The section of the agenda devoted to "pearls" and questions was an opportunity for the "old" staff to provide their pearls of wisdom and the "new" staff to ask questions. The comments and questions from participants were recorded and shared with the large group. The vice-principal led the discussion but the returning teachers contributed to the discussion as well. All staff were given the opportunity to share what they learned and questions that arose.

After this discussion, we spent time clarifying the two goals for the year. Our starting point for our first question (What are the resources that we can use to connect to the curriculum?) was the staff itself. We spent time sharing what each staff member could contribute to the school, the students and the classroom. People recorded their major areas of study, their interests and the things that they would be willing to help each other with.

After this illuminating discussion, we briefly met in our two pods. The K-4 pod had two returning teachers and two new teachers. While the Grades 5-8 pod had two returning teachers, they had each been in different pods the year before. In addition, two teachers were new to the pod. This first pod meeting established the meeting dates for the next four months and determined each pod's starting point. The starting points stemmed from the "pearls" and questions of the pod members. To ensure that each pod knew what the other pod was doing, we spent a little time at the end of the session sharing our plans and meeting dates with each other.

Our opportunity to meet at the Brightwater Science and Environmental Centre was beneficial to the staff for several reasons. We were able to provide a history of our research, as well as develop a starting point that was agreeable to all staff members. The time spent getting to know each other was very important, as we were able to function as an effective team throughout the school year.

Action Research at Montgomery School

SCAVENGER HUNT

One problem we had faced last year was determining what resources were available to students and staff members in our school. Only three staff members had been in the school for more than two years. Everyone else was new. Very few people knew where resources were and what we actually had.

During one of our staff meeting days, we divided the entire staff into four groups: science, math, art and physical education. Each group was responsible for exploring the entire school to find resources applicable to one of these four areas of study. In addition, each group had to provide an inventory of what was available. These lists were submitted to the administrative team which determined a dollar amount for what could be spent on resources in each area of study. Staff members were then asked to submit a wish list of resources, including the amount, price and vendor.

This exercise was excellent for several reasons. First, we were able to determine what resources we had available in the school. Second, we were able to decide what materials were needed to improve our teaching, and finally, we were provided with money to purchase some of these items. Also, the wish list of resources has been kept for future years so that we can add to the school's resource base.

Although the entire staff is not yet current about what resources are available in each of these areas, at least one member of each pod was in each of the four groups that conducted the scavenger hunt. One of our school's goals for next year will be to share our knowledge among the staff members, so that everyone knows what resources are present in the school. For the moment, however, if resources are needed, every staff member at least knows who to go to in order to find information.

OTHER PROJECTS OFFERED IN OUR SCHOOL

In 2001-2002, we found ourselves inundated with projects. In addition to the research grant from the McDowell Foundation, we received a grant from the Grassroots project. Also, our school participated in the Green School initiative, the Creative Adventure sponsored by the Saskatoon StarPhoenix, and an intern placement for nursing students from the University of Saskatchewan. Although many of the teachers were enthusiastic about implementing all these initiatives, we found that, once again, we had taken on too much. As a result, the Destination Conservation and Green School projects were not as successful as we had originally intended.

POD K-4

The Pod K-4 meetings were scheduled for each month from September to December. From January to April, meetings were scheduled less frequently as teachers were involved in a variety of other activities that interfered with the scheduling. The fall meetings encouraged teachers to continue implementing the interdisciplinary teaching strategies, while the spring meetings focused on teacher reflections. Agendas at the meetings addressed issues and seasonal activities that were important to teachers and their students (e.g., Education Week, which was held Oct. 22-26). Minutes from each meeting were recorded and used to:

- a) plan for the next meeting,
- b) provide data for the final report, and
- c) see how teachers were progressing with interdisciplinary teaching.

At meetings, the questions for this phase of the research were reviewed from time to time.

SAMPLE OF MEETING AGENDA AND MINUTES

Stirling McDowell
Pod Group 1:
September 14, 2001 am

Attendance: Krista, Lois, Linda K., Monica, Jennifer, Deb, Angela
Secretary: Angela
Location: Preschool room

Resources needed:

Meeting started with a discussion about resources needed to support our teaching. Deb and Krista need Grade 2 and 3 Readers. Krista needs math games on her classroom computer; would prefer games to be loaded onto the hard drive so discs aren't necessary. Good Internet resource is www.freeworksheets.com. Science materials are in short supply in general: Linda K. would like at least one microscope available. Angela is purchasing magnets which will be stored in the K room for whole school use. Writing dictionaries are needed – Krista and Deb will work together re this. A globe, world map and Canada map should be available for each classroom.

Theme teaching together:

"Connecting to the Community". Education week is Oct. 22-26. We will work as a pod (and perhaps involve the whole school) in reaching out to the community by raking leaves and making class "people" (looking like teachers!) out of recycled clothes and some of the leaves. Linda G.

recommended having the Grade 8's deliver flyers to the whole community asking those (seniors in particular) people who need help raking to let us know. Some leaves will be put into large orange jack o'lantern bags to decorate the front of the school ready for Halloween. Discussion re safety issues – always parent with a group, Kindergartens use plastic rakes, will talk to students re safety concerns prior. Initial intro. To this project will be in the Montgomery school newsletter; it is also in class newsletter. Choir could sing to seniors perhaps in this week, or at some point in the school year. This all will be tied into the Grassroots project "Connecting to the Community".

Christmas Concert:

Jennifer would like us to do "Living in a New World". K-Grade 6. (7's and 8's would go caroling again.)

Ideas incorporated into this concert are: greens school, commercialism, and Christmas wishes, real meaning of Christmas. Strong Narrators will be needed

Grassroots Project Connecting with Community:

After a short break we worked on our individual grassroots proposals in the library.

Next Meeting: Wednesday morning 17 October in the preschool room.

TEACHER REFLECTIONS

QUESTION 1: WHAT ARE THE RESOURCES WE CAN USE TO CONNECT TO THE CURRICULUM?

It was very valuable to spend time sharing our strengths – everyone in the building has something, or many things to offer to make the Montgomery team strong. We have built on these natural, internal resources this year. For example, one teacher led Ukrainian Easter egg decorating, while others acted as resources with respect to art, assemblies, PowerPoint presentations or web design.

As a pod we planned some activities working cooperatively across the grades and utilizing various resources. For example:

- A school division consultant came in and gave all the classes in Pod 1 a dance lesson.
- We had an afternoon workshop on HTML, which was a very valuable use of a pod meeting.
- Brainwalk – all grades in the school learned about the importance of, and ways to protect, our brain.
- Swimming – the whole school participated in a trip to Lakewood pool, which was great for school spirit.

- Pod K-4 went to a production of *Sleeping Beauty* at a Saskatoon high school.
- Community health nurses worked with all classes.
- Green team – the whole school is working cooperatively to attain Jade status for the school.
- An anti-bullying talk and demonstration was provided by the Saskatchewan Roughriders' football team.
- Care-partners – there were many cross-grade projects and cooperative learning activities (e.g., making dinosaurs out of boxes and cleaning up the yard)

At its first meeting, Pod K-4 identified many resources needed to help deliver the curriculum. The money was found to purchase most, if not all, of them. Some examples include: class paintbrushes, *Collections* readers, science equipment, and Kindergarten resources (magnetic alphabet set, letter tiles).

We also identified and used a multitude of resources connecting to the curriculum, for example:

- Montgomery School teacher-librarian and learning resource center
- Saskatoon Curriculum Materials Center
- Science units locally developed in Saskatoon
- Creative Dance Keys
- Various subject-related kits and videos from our system library
- The school division's physical education consultant for creative dance
- Two Ukrainian dance instructors
- Western Development Museum in Saskatoon
- Student nurses from the University of Saskatchewan
- Community members who could speak on the history of the Montgomery area
- Community members able to provide instruction on sports activities and crafts

Using these and other resources, we worked at connecting to the curriculum in a variety of ways, including:

- A trip to Western Development Museum to view harvesting methods from the past to the present day.
- Creation of a PowerPoint presentation on early harvesting methods for the school's web site.
- Collection of stories about the early years to supplement the unit on harvesting.

- Instruction and practice in curling at Montgomery Rink.
- Creation of decorations related to curling for the Saskatoon Ladies' Bonspiel and the Men's Northern Playdowns.
- Bowling lessons and games at Fairhaven Bowl.
- Downhill skiing at Mount Blackstrap outside Saskatoon.
- Attendance at the Saskatoon Festival of Trees, which was followed with our own classroom Festival of Trees.
- Visit by a weather technologist to supplement the science unit on weather.
- Class participation in a Creative AdVenture program sponsored by the city's daily newspaper.
- Visit to the Saskatoon Fall Fair Beef Show to supplement a unit of study on Saskatchewan industries.
- Visit by members of the Saskatchewan Roughriders to promote bully-free schools.
- Novel study of *Pit Pony* to supplement Bully Free Schools.
- Novel study of *A Puli Named Sandor* by Janice Siamon to supplement City of Saskatoon.
- Participation in the Pizza Hut national reading-incentive program, which promotes reading at home.
- Achievement of Jade School status by working as a school on Recycling, Re-using and Re-ducing waste.
- Presentation on Green schools by a guest from Ontario.
- Sale of pizza pretzels to promote business awareness.
- Connection to the Ukrainian community by making Ukrainian Easter eggs.
- Connection to other classes at Montgomery School by teaching them to make Ukrainian Easter eggs.
- Connection to the Montgomery community by hosting two Christmas craft afternoons with Montgomery parents and grandparents.
- Connection to the Montgomery community through a Christmas celebration.
- Neighborhood walk around Montgomery School area.
- Bus trip to the farms where two of our students live.
- Participation in the Gargoyle Tour sponsored in downtown Saskatoon by the Meewasin Valley Authority.
- Tour of the historic Bessborough hotel.
- Visit and presentation by a consultant for Indian and Métis education.

- Trip to Batoche, Fort Carlton and Duck Lake to supplement unit on Indians and Métis.
- Trip to Wanuskewin National Heritage Park.
- Beading necklaces.
- Making bannock in class.
- Visit to the school by an Aboriginal Elder.
- Visit to the school by an Aboriginal dancer and singer.
- Participation in the Little Green Thumbs Tour during Gardenscape.
- International Children's Festival.
- Tour of the Mendel Art Gallery.
- Participation in SmArtwork (we won this contest to develop a poster on saving our environment for Clean Air Day and we celebrated with a trip to Diefenbaker Park on the bus decorated with our poster!).
- Guest speaker on Grade Three bike safety.
- Guest speaker on the Montgomery Winter Olympics.
- Presentation of *The Green Kids*, an environmental play.
- Celebration of the Chinese New Year with a talk about China by parent volunteers and a video presentation on our principal's trip to China.
- Talks by other parent volunteers that helped students and teachers learn about people in our community (e.g., what it is like to be a police officer or live and work on a Saskatchewan farm).

QUESTION 2: WHAT CAN WE DO TO KEEP OUR PARENTS POSITIVELY INFORMED ABOUT COOPERATIVE LEARNING AND INTERDISCIPLINARY TEACHING?

Throughout the year we used parent volunteers on a regular basis. In response to our invitations to participate in class activities and trips, parents came out for events such as the Olympics and Brain Walk, and they acted as helpers in our classrooms in making rice for Chinese New Year, planting seeds and re-potting plants, and assisting with reading, writing, math and group work. These volunteer opportunities helped to keep our parents and community informed.

A hands-on approach to instruction, the use of small group discussions and follow-up activities assisted in keeping the school open and passing on information about what was happening in the classroom. Parents were always invited to class to participate in activities. One parent brought her digital camera and took all the pictures during the year. There were a number of assemblies throughout the year that parents were encouraged to attend (e.g., the Christmas concert, our class assembly for the "Three Piggy Opera" and whole school assemblies, such as the one held for Remembrance Day).

In addition, parents were asked to provide transportation for field trips. By providing transportation to and from activities, they gained valuable insight into class programming and their child's participation. We visited a number of places this year, including the Mendel Art Gallery, Festival of Trees, Safeway, Western Development Museum, Children's Festival and Kinsmen Park.

Student work was also sent home. In addition to the on-going records and progress reports, parents received class projects, assignments and reports.

We also provided information to them through classroom newsletters and the daily message book, which parents read and initialed. In this way, parents were kept informed about classroom activities and the integrated learning occurring in each class. The classroom newsletters linked classroom activities to the curriculum.

Cooperative learning occurs daily in the classrooms at Montgomery School. Students sit with a buddy and work together. If a student's buddy is away, the student copies the absent person's work and collects for him or her any new handouts and newsletters.

Other examples of communications with parents and community included:

- An evening focusing on the curriculum;
- Daily chats at the school door and phone calls to parents;
- Weekly homework assignments, i.e., family homework, related to class work so that parents are kept informed about the work happening in the classroom;
- Kindergarten information night for parents of next year's Kindergarten child; and
- School web site on which children's work is posted.

The school web site was initiated this year and proved to be an excellent way to communicate with parents. It allowed teachers to post their newsletters, and the school newsletter was also posted.

Formal communication channels continued to play a role at Montgomery. Reporting documents, program summaries and three-way conferences all contributed to parental awareness of the cooperative and interdisciplinary learning taking place in the school.

SUMMARY FOR POD K-4

As we look back over this past school year, we are amazed at all we have accomplished with our students, for example:

- The variety of class/school activities that have been integrated across grade levels and curriculum this year,
- The Grass Roots project that helped us put some of our work online and work together to communicate via the worldwide web, and
- The inviting school climate that has been created by the administration and staff.

The opportunity to participate in the first part of the project made many of us aware of the importance of interdisciplinary units of study and the importance of cooperative learning. Our research focus during the past year was a great way to further these understandings as well as become familiar with resources that ensure the implementation of the interdisciplinary units of study. Due to staff changes at Montgomery School, some resources were difficult to find or nonexistent. For example, magnets were not available and this piece of science equipment had to be purchased. We were also fortunate enough to reorganize our art room and acquire new paintbrushes for all our students.

The physical setting in some classrooms helped in the initiation of cooperative learning strategies. Students are fortunate enough to sit at tables, and these tables have been imperative in encouraging partner work and small group work. Grade Two students begin their day with partner work for reading the weather every morning.

The students in the Grade 1/2 class also participated in a virtual science fair, integrating science, language arts, visual arts and technology as they completed the school web site.

Connecting with the community was an extensive part of the curriculum this year. Students had the opportunity to learn about students in Sierra Leone due to the vice-principal's trip there in November. Upon her return she shared her experiences with all classes.

Pod 5-8

TEACHER REFLECTIONS

The middle years pod, as we became known as, consisted of the Grades 5, 6, 7 and 8 teachers. In September our group discussed our objectives for the upcoming year in more detail. It became apparent that two of our pod members felt uncomfortable with the expectation that they would teach cooperative learning in their classrooms. As a result, we chose to participate in a seminar, presented by several consultants, called *Blueprint for Cooperative Learning*. Although two members of the pod had

spent the previous year implementing cooperative learning in our classrooms, we felt that the entire pod could benefit from another session about cooperative learning.

Our half-day meeting in October was spent discussing the seminar and how it could be applied to our situation. We decided to develop a middle years theme based on the Olympics during February. The November, December and January meetings (half days) were spent planning the unit. During the actual weeks of the Olympics, we invited the whole school to participate in an Olympic Day. The Grade 6 class chose the teams and made banners and flags. The Grade 8 class planned the opening ceremonies. The teams consisted of students from all grades. The older students led the teams through the activities, while the teachers staffed the activities. These activities included sledge hockey, curling, snow soccer, luge, tug-of-war, smooshing and hot chocolate. Our integrated unit was a huge success for all students, not just the middle years.

Our pod spent part of the February meeting debriefing the Olympics Day, and then we determined how to spend the remainder of the year. We decided to concentrate on discovering our internal school resources. For the remaining three pod meetings, the members of our pod worked individually, in pairs and then again as a group. In the pod, teachers had the opportunity to discover what resources were available in the library, on the Internet or throughout the school. The Grade 5 and 6 teachers met together for one pod meeting, as did the Grade 7 and 8 teachers. In order to provide continuity for the following years, we chose to discuss our year plans and, based on our areas of expertise, what specific parts of the curriculum could be covered in each year. During our last group pod meeting, we evaluated our year's work and recorded our successes and failures.

SUMMARY FROM POD 5-8

QUESTION 1: WHAT ARE THE RESOURCES WE CAN USE TO CONNECT TO THE CURRICULUM?

Positives

- Our Language Arts consultant provided resources for us to preview prior to purchase. We liked and appreciated this opportunity. She also provided instruction in areas requested by the teachers.
- We found resources in the teaching section of the library that we never knew existed.
- Several classes explored the heritage of the Montgomery area. The histories of the area connected to our own families.
- The DARE program led by the Saskatoon Police Department was beneficial to Grades 7 and 8, as was having a police consultant available to our school.
- The school nurse provided by the Public Health Department was an excellent resource in Health for all grades.

- The Saskatchewan Roughriders' presentation on bullying was excellent for all grades.
- The Green Kids, an environmental group, demonstrated through drama the importance of our environment.
- We accessed the local golf courses, curling and skating rinks in the area.
- The *Collections* sets were used for K-6 classes, with each class purchasing one unit for that class. We hope to add one unit per year to each classroom.
- The Grade 7 and 8 teachers discovered that *Canadian Mathematics* and *Aftermath* were complementary to their math programs.
- "Problem of the Week" math questions were provided in Grade 5 for enrichment.
- Units and other information were gained through UNICEF.
- Novel sets from our school library were used for the theme empowerment, identity and survival.
- The teacher-librarian was very useful for bringing in novel sets from other schools.
- Lantern videos were used a lot for Grades 6, 7 and 8. The teachers determined that the videos were more applicable to the earlier grades, although the videos on ecology were good.
- A list of resources provided by some of the consultants was very useful.
- The University of Saskatchewan's Extension Division was helpful in providing information and activities applicable to older grades.
- Our personal collection of resources and research contributed a great deal to the success of instruction in our classrooms.
- The Mendel Art Gallery provided excellent hands-on activities and art appreciation for middle years students.
- The Grade 5 Dairy Expo at the Exhibition was useful.
- The Canada-wide Science Fair and Heritage Fair were beneficial to middle years students.
- The Grade 6 class visited the Regina Science Center and other museums.
- Numerous useful programs were provided through the Saskatoon Forestry Farm.
- We accessed the expertise of another teacher in our system in the designing and painting of our school walls.
- Each classroom in our school benefited from the participation of two nursing students from the University of Saskatchewan (two interns every six weeks).
- Several students from the College of Education at the University of Saskatchewan volunteered to tutor students.

- The Stewart Resources Centre of the Saskatchewan Teachers' Federation contains many useful resources, including *Principles of Native Interactions*.
- The excursions to the Brightwater Science and Environmental Centre, Pike Lake and Beaver Creek were extremely beneficial for middle years students.
- The Saskatoon Public School Board's instructional strategies web site proved to be useful.
- Web Quests and the StarPhoenix's Creative Adventure were both excellent resources.

Negatives

- Although the Belly Button Babies provided a good activity for the younger grades, they were not appropriate for the middle years. The Grade 5 students enjoyed the activity, but the Grades 6, 7 and 8 classes did not benefit from it.
- Although we have school resources for Math, Language Arts, Art and Physical Education, we lack resources for Science and Social Studies.

QUESTION 2: WHAT CAN WE DO TO KEEP OUR PARENTS POSITIVELY INFORMED ABOUT COOPERATIVE LEARNING AND INTERDISCIPLINARY TEACHING?

- Many of the classrooms had homework books that served as an avenue for communication between the school, the student and the home.
- Teachers were expected to send monthly class newsletters home. Some of these newsletters were designed and written by the students; others were created by the teachers.
- A school web site was initiated through Grassroots funding.
- Parents were invited into the school as volunteers, both in the classroom and during field trips.
- Photos of classroom and school activities were posted throughout the school. Parents can walk anywhere in the school and observe what is happening in the classrooms. However, since all photos have remained posted, there is now little wall space available.
- Newsletters were sent home twice a month. Draws were completed once a week for those students returning the "Have I Read the Newsletter?" question.
- A whiteboard was installed at the front of the school so students, teachers, parents and visitors could view upcoming activities for each week.
- Staff communication improved with the inclusion of a large monthly whiteboard calendar in the staff room. Staff members record on it what is happening in their classrooms.
- Assemblies occurred on a regular basis and parents were always invited.

K-8 Recommendations

1. RESOURCES AND CONNECTING TO THE CURRICULUM

- Teachers should continue meeting once a month in the two pods. Although teachers from the middle years pod agreed to meet before or after school, their first suggestion was to request that one of the four monthly staff meetings be put aside for pod meetings.
- All the middle years teachers agreed that we should continue with integrated units each year. We should attempt to do one before Christmas and another after January.
- We agreed that our School was committed to too many projects this year, and we need to ensure that the school staff does not take on so many. Although we integrated our McDowell and Grassroots projects nicely, the Destination Conservation, Green School, Creative AdVenture and Nursing programs were difficult to keep up with, especially with new staff.
- Pod meetings are beneficial when we have common goals. We found our pod meetings modeled what we are supposed to be doing in our classrooms.
- We should take time each month at one of our staff meetings to inform each other of the resources available within the school. We need to develop an inventory and signing out system that is user friendly to all staff.

2. KEEPING PARENTS INFORMED

- At the beginning of the year, we should obtain parents' e-mail addresses so we can e-mail school and class newsletters to them. We would like to cut down on the number of hard copies we produce, which will, in turn, benefit our new status of Jade School.
- Parents currently receive school day planners, and it was suggested that students should also receive the day planner to keep themselves organized in their classes.
- We should continue the monthly classroom newsletters.
- We should also continue the bi-monthly school newsletters and the use of draws to encourage reading of the newsletter.
- The volunteer program in our school should be maintained.
- We must continue celebrating our achievements throughout the school.

Summary

Our second year with the McDowell research grant proved to be successful. Based on the recommendations of our first year's research, we decided to answer the following two questions:

1. What are the resources that we can use to "connect to the curriculum"?
2. What can we do to keep our parents positively informed about cooperative learning and interdisciplinary teaching?

We divided our teaching staff into two pods: K-4 and 5-8. Since half the staff was new to the school we started the year by reviewing last year's research goals and discussing the findings. We also took this time to participate in a number of activities that promoted and developed our teamwork. Many teachers commented that this team building at Brightwater was instrumental to our success this year.

Although meetings for the two pods differed depending on the needs of the individual teachers, both pods planned and implemented one thematic unit for the grades applicable to the pods. Remaining time was spent searching for resources within the school, system and community that connected to the curriculum. As was expected there were a huge number of resources both within the school system and in the community of Saskatoon. We were however, limited as to the number of resources within our school walls. We found that our school was rich in the resources that each staff member had to offer in terms of areas of study, hobbies and interests. However, we also discovered that some curriculum areas were lacking in resources. Each staff member was assigned to a curriculum area, and these "expert groups" took responsibility for providing an inventory and a wish list of resources in that area. Over a five-year period, our school intends to add to its baseline inventory of resources.

This year we continued with school newsletters to inform parents of school activities. Newsletters were sent home twice a month. To encourage reading of the newsletter by both students and parents, the school implemented draws for Monty (school mascot) pens and key chains. Class newsletters were sent home at least once a month. At least one teacher encouraged students to write the newsletter. Most teachers wrote their own letters for parents. Other methods of keeping our parents positively informed of their children's learning were phone calls, homework books, invitations to volunteer in the classroom and on field trips, the school web site, and photographs of activities throughout the school.

Overall, the answers to our two questions were positive. We recommended that monthly pod meetings continue and that some time be given at staff meetings to accommodate pod meetings. All the teachers wanted to continue with multi-graded planning and interdisciplinary teaching. We all recognized, however, that time and support were beneficial to ensuring the success of this kind of instruction. During the project, the necessary support came from the networking and assistance received from each other during school, especially during pod meetings. We valued our pod meeting time and recognize the necessity of scheduling time during future staff meetings.

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