The Impact of Home/School/Community Collaboration
On Student Achievement: An Analysis of *Reading Renaissance*

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Introduction

Recent research has focused on the positive relationship between strong library media center programs and student achievement. Results of the latest statewide studies of library media programs in Alaska, Pennsylvania and Colorado show that the level of collaboration between the classroom teacher and the library media specialist is a major indicator of student achievement (Lance & Rodney, 1999). Student test scores increase when there is a high level of collaboration between the classroom teacher and the media specialist (Lance & Rodney, 1999). A strong teacher-media specialist collaborative partnership, when combined with a library media center filled with resources and staffed by trained library professionals, results in higher student achievement (Doiron & Davies, 1998). Further evidence of the contribution of a strong media center program to student success is documented by Loertscher and Woolls (1999), who emphasize the importance of reading and access to a wide range of good books, as key factors in increasing student achievement.

Investigating the role of teacher-media specialist collaboration is not a new phenomenon, as research has been conducted in this area since the early 1980’s (Gross & Kientz, 1999). Most of the current literature has centered on the external factors of collaboration, such as budget, personnel, planning time, administrative support, flexible scheduling, collection development and facilities (Pickard, 1994; van Deusen & Tallman, 1994). These factors are certainly extremely important in establishing collaborative relationships within a school. However, of equal importance to the collaborative relationship are the internal factors, such as the dynamics, leadership and communication within a group and between groups. Each of these plays an integral part in successful collaboration. Moreover, as pointed out by Muronaga and Harada (1999), there is not much documentation in current library literature of research into these factors and their effect on successful collaborative efforts.

The purpose of this literature review is to explore factors of collaboration, such as group dynamics and effective communication, and how the collaborative relationship between the home, school and community affects student achievement. By knowing how these groups can work together most effectively, the school has a much better opportunity to improve not only the quantity, but also the quality of these collaborations. And, as the research in this literature review will show, increased collaboration between home, school, and community leads to improvements in student achievement.

This paper is organized into the following sections: a) characteristics of collaborative relationships within the school culture; b) creating collaborative partnerships; and, c) components of successful collaboration. Throughout the paper, examples of successful collaborative efforts in the *Reading Renaissance* program will be highlighted.

Characteristics of Collaborative Relationships within the School Culture

What Is Collaboration?

Collaboration in the truest sense is not simply about people getting along with and cooperating with each other. Rather, it is a very complex process that involves many stages of development and encompasses a wide range of emotions (Gross & Kientz, 1999). It is a group planning or problem solving process, in which decisions are made in an atmosphere of trust, mutual respect and open communication (West, 1990).

Common Characteristics

Though the collaborative process is complex, it is possible to identify characteristics of collaboration. Over time, as groups work together, they tend to develop a personality with definite patterns, expectations and norms (Deal & Peterson, 1999). What are some of the more effective personality traits for collaboration? Research studies identify flexibility, compromise, trust, respect, sharing, and acceptance of other ideas and working styles as
important traits of collaboration. Collaboration is strengthened when group members are more diverse in classroom and personal experience, background knowledge, and personal characteristics. Diversity brings a much broader perspective to the group decision making process (Bishop & Larimer, 1999; Haycock, 1997; Hurren, 1993; Muronaga & Harada, 1999; Phillips & McCullough, 1990; West, 1990; Wolcott, 1994).

In addition to accepting the ideas and working styles of others, it is also important to share the responsibility and the decision making among all members of the group. When a group is truly collaborative, members interact in a manner that stresses a sharing of responsibility for the teaching and planning process (Hurren, 1993).

Friend and Cook (1992) emphasize the importance of observing the silent communicators, such as body language and facial expressions. Both are very strong indicators of group interaction and can send out very powerful signals about the emotions of group members. Friend and Cook also note the importance of recognizing spatial relationships, for example, how close a speaker is sitting to another when talking. As different zones of space are considered appropriate for different situations, the invasion of personal body space plays an important role in the group interaction. Thus, appropriate body language, facial expressions and spatial relationships may be considered as indicators of a successful collaborative relationship.

In a project comparing results from five different research studies on student achievement, Taylor, Pressley and Pearson (2000) identify practices that are indicators of effective schools. One of the commonly shared practices in effective schools is strong teacher collaboration, exemplified by communication and planning, as classroom and resource teachers and media specialists work together to make the most of time spent in instruction. Collaboration across teams and across grade levels can provide opportunities for teachers to improve their understanding of curricular areas and expectations.

An excellent example of collaborating across grade levels for the purpose of improving reading achievement occurs in discussions that take place in the Reading Renaissance Council (RRC). Many schools that participate in the Accelerated Reader computerized reading motivational system form an RRC which serves as the guiding force behind their reading program. Membership in the RRC often consists of classroom teachers, the media specialist, reading teachers, administrators and parents, who collaborate in the planning and decision making processes which govern the Reading Renaissance program. The RRC also plans special school-wide reading events, such as Family Literacy Nights that allow parents to have an opportunity to read with their students and learn more about Accelerated Reader.

Roadblocks and Barriers to Collaboration within a School Culture

What are some of the roadblocks and barriers to effective collaboration in a school setting? Regardless of the cohesiveness of a team, there will be times when conflict arises. Osguthorpe (2000) concedes that such conflicts are going to occur and that they can be very detrimental to the collaborative process. The conflicts may be internal (within a team member) or interpersonal (member to member), but must be resolved in order for the collaborative process to be successful.

An understanding of the barriers to collaboration is vital to its success. Phillips and McCullough (1990) list four categories of barriers: 1) conceptual, 2) pragmatic, 3) attitudinal, and, 4) professional. Conceptual and attitudinal barriers often involve ideas that have formed over many years within individual team members, such as perceptions of their teaching roles within a school. Pragmatic barriers are usually concerned with logistics, such as scheduling, or the amount of time that is available to spend on a project. Finally, the professional barriers can develop over differences in educational philosophies, or in knowledge and skills levels of team members. For example, classroom teachers are often unaware of what resource teachers do and of how these teachers can assist them. Teacher isolation and individuality, space restrictions, and lack of funding may also interfere with collaboration (Hargreaves, 1989, as cited in Hurren, 1993; Lortie, 1975; Minnes, 1991).

Research into the dynamics of collaboration has determined that successful collaboration is a complex process, requiring trust, respect, acceptance of the viewpoints and working styles of others, sharing, and compromise. During the process, team members may face conflict and encounter barriers, such as philosophical differences. The collaboration process requires considerable effort and teachers will need help along the way, as collaboration will not take place on its own (Pounder, 1998). A thorough understanding of collaborative characteristics and barriers allows team members to increase the chances of collaborating successfully.
Creating Collaborative Partnerships

Teacher-Media Specialist Collaboration

Haycock (1999) reports that the benefits of teacher-media specialist collaboration include a positive impact on student achievement, personal growth, and stronger professional relationships among the collaborating teachers. The classroom teacher and the library media specialist become “instructional partners”, who are working together to identify the needs of students, design instruction, and monitor student progress (American Association of School Librarians [AASL], 1993, p. 1). Library media specialists are classified in Information Power: Building Partnerships for Learning [IP] (AASL, 1998) as information specialists, program administrators, and instructional and curriculum partners. It is important to note the change in the wording in the newer edition, from “instructional consultant” to “instructional and curriculum partner,” an indication of a philosophical shift with emphasis on a more collaborative, shared relationship between the teacher and the media specialist (Muronaga & Harada, 1999).

Why create collaborative instructional partnerships? Taylor, Pressley and Pearson (2000) describe effective schools as “collaborative learning communities” in which the entire staff shares the responsibility for the achievement and well-being of all students, and makes an effort to reach out to the families of their students (p. 8). With the increased emphasis on reading achievement, classroom teachers, media specialists, paraprofessionals and resource teachers are working together and sharing the responsibility for reading improvement (National Education Association [NEA], 2000).

The Accelerated Reader program requires the close cooperation of the classroom teacher, reading resource teacher and the media specialist. From the selection of the library books to the training, management and promotion of the AR program, a true partnership is required to reach the goal of improved student achievement in reading.

Recent research describes the strong link between library programs that emphasize collaborative planning and increased student achievement (Hamilton-Pennell, Lance, Rodney, & Hainer, 2000; Lance & Rodney, 1999). In Information Power (AASL, 1998), the themes for model library programs are collaboration, leadership and technology. Using these themes, statewide studies of library media programs were conducted in Colorado, Pennsylvania and Alaska in 1998-1999, to determine the relationship between teacher-media specialist collaboration and student achievement. Results indicate that K-12 students show higher achievement when the media specialist is included as a member of the planning/teaching team. In the Alaska and Colorado studies, statistics show that collaborative planning between the teacher and the media specialist is a strong predictor of academic achievement (Lance & Rodney, 1999).

One of the most important areas of collaboration for classroom teachers and library media specialists is information literacy. Shapiro and Hughes (1996) define information literacy as a “new liberal art” that is essential to the student of the information age (p. 3). Information Power (AASL, 1998) provides standards for the information literate student stating that collaboration among teachers, administrators and other members of the learning community is a “keystone to meaningful instruction, expanded information access and effective program operations” (Harada & Donham, 1998, p. 3). Information literacy provides the access to information that will open the doors of opportunity for today’s students.

Collaboration is also an important contributor to reading achievement. Taylor, Pearson, Clark, and Walpole (1999) describe similar results in the Center for the Improvement of Early Reading Achievement [CIERA] Beating the Odds study of effective schools. The study compares four high performing schools with ten lower performing schools, to identify characteristics of effective schools. As a basis for the CIERA study, the researchers used the eight recurring attributes of effective schools as identified by Hoffman (1991) in his landmark study, Teacher and School Effects in Learning to Read. The CIERA project research indicates that “schools [which] achieve unexpected results in high poverty settings use collaborative approaches among classroom and special teachers for reading to provide small group instruction and to better meet individual student needs (correlation with achievement=.37)” (p. 5). All four of the most effective schools cite collaboration within and across grade levels as a reason for successfully improving reading achievement.

Numerous research studies report an increase in student reading achievement through the use of Accelerated Reader [AR], the computerized management component of the Reading Renaissance program. Vollands, Topping and Evans (1999) note that the use of AR and partial implementation of Reading Renaissance techniques increased scores in the area of reading comprehension among sixth graders studied in two projects in Aberdeen, Scotland. The students using the AR program also showed a greater improvement in their attitude toward reading than students in the non-AR control group.

Lawson (2000) observes that the implementation of Accelerated Reader and Reading Renaissance in Portola Middle School in Orange, California, is credited for an average increase of more that one year’s growth in
reading achievement among sixth to eighth graders. Additional effects are increased motivation to read and a
tremendous jump in library circulation from 700 to 4,000 books a month. Success stories such as these are not possible without a high level of coordination and support for the Reading Renaissance philosophy, and the full collaboration of classroom teachers, media specialists, administrators and parents.

In the Colorado study, Lance and Rodney (1999) also determine that strong leadership by the library media specialist [LMS] has a high impact on academic achievement. In schools with high achievement, the LMS is much more likely to plan cooperatively with teachers; teach cooperatively with teachers, as well as independently; provide in-service training to teachers; and, manage the computer network that links the library media center, classrooms and lab.

According to the Colorado study, research shows that when the LMS takes a more assertive role, the classroom teachers are more willing to collaborate. Manzo (2000) determines that when the media center becomes the learning center of the school and the teachers and media specialist are encouraged to collaborate on lesson plans and assignments, there is an increase in student achievement.

How can the LMS take a more assertive role in collaboration? Research into the qualities of strong leadership indicate that the LMS should be a strong advocate for the collaborative process and work continuously to nurture relationships, by showing an interest in and sharing ideas and decision making with team members (Haycock, 1997). The assertive leader builds trust among team members, is approachable, flexible and willing to change. It is essential to include all team members in the collaborative process, as strong leadership can come from the middle as well as the top (Harada & Donham, 1998; Muronaga & Harada, 1999; Wolcott, 1996). During the collaborative process, media specialists may need to take on many roles as they establish harmony and offer encouragement or suggestions for compromise (Abelson & Woodman, 1983).

Unfortunately, all classroom teachers will not be receptive to collaborative efforts. Some may be not be motivated to participate in the collaborative process due to lack of interest, fear of the unknown, reluctance to let go of the control associated with the self-contained classroom, or a simple lack of knowledge about the collaborative process. In these instances, the assertive leader must make the extra effort to form the instructional partnership that according to research findings, will eventually result in increased student achievement (Williams, 1996).

**Parent-Teacher Collaboration**

A second partnership that greatly impacts student achievement is the collaboration between home and school. Much research has been conducted on the relationship between parent involvement and student achievement. Lazar, Broderick, Mastrilli and Slostad (1999) recognize parent involvement as a critical influence on student achievement. In the study of effective schools, Hoffman (1991) cites positive home-school relationships as one of his eight recurring attributes of effective schools. Recent research indicates that positive parent involvement plays a major role in influencing outcomes, such as higher grades, long term academic achievement, increases in student attention and retention, and enhanced motivation and self-esteem (Lazar, et al.). The GOALS 2000: Educate America Act (Lazar & Slostad, 1999) states that “every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children” (p. 2).

Communication between home and school is a key factor in improving parental involvement. Developing effective methods of communicating to parents about school programs and student progress is critical to successful parental involvement (Epstein, 1998). When parents keep home journals, in which they record observations of their child and enter questions for discussion with the teacher, a strong communication bond is created between the home and the classroom teacher (Morningstar, 1999). When schools improve the level of communication, parents often respond reciprocally, resulting in a stronger working relationship (Robinson & Fine, 1994).

Research shows that this home/school partnership includes two types of parental involvement—surface and meaningful (Criscola, 1984). Surface involvement consists of volunteering efforts such as running the copy machine, shelving library books or monitoring students in the cafeteria. Meaningful involvement occurs when the parent assists the classroom teacher through activities such as helping small groups of students with reading or math. Accelerated Reader is an example of a reading motivational program that can offer opportunities for meaningful parental collaboration. Parents can provide quiet reading times at home, assist students as they take their comprehension tests on the computers at school, or use the online database to locate an AR book that is on the student’s appropriate AR book level (Guth & Heaney, 1998).

Research by Gordon (1978) reports that when parents actively participate at school whether through advocating, decision making, fund raising, volunteering or providing at home learning activities, student achievement improves.

However, the home-school collaboration process is a complex one, in which there are often many barriers to overcome. Because of increased ethnic and cultural diversity among student populations, when developing policies and procedures, schools and teachers must become more sensitive to the ethnic balance and diversity within
their community (Caplan, Hall, Lubin, & Fleming, 1997). Minority parents often view schools with a sense of mistrust and alienation, as they may not understand school operations, procedures and policies. They may even feel intimidated or unwelcome because they don’t share the education level, income level, or ethnic background of the teachers and administrators at their child’s school (Dunlap & Alva, 1999).

Negative school experiences often create mental attitudes that inhibit strong parental involvement. These negative attitudes may stem from unsuccessful or unhappy school experiences in the parent’s background or from negative experiences encountered in the schooling of their own children (Dodd & Konzal, 2000). Distance and time may also form barriers to parental involvement, especially for parents of middle and high school students, whose schools are often located farther away from the student’s home. Many parents work outside of the home and find it difficult, if not impossible, to visit the school during normal working hours (Caplan, et al., 1997).

What can the school do to overcome these barriers and to increase partnerships with parents? Research suggests that the school should ensure that parents know that they are valued for their skills and knowledge. One approach is to create action teams that provide leadership opportunities and include parents in the site-based decision making processes (Dunlap & Alva, 1999; Epstein, 1998; Zuniga & Alva, 1996).

**Strong Families, Strong Schools: Building Community Partnerships for Learning** (1994) offers additional suggestions, such as reinforcing successful child-raising skills, accommodating families’ work schedules, using technology to link parents to classrooms, promoting family learning and making school visits easier. Computer technology is providing many ways for parents to have greater knowledge of school events. Online access to school and classroom web pages offers information about homework assignments and classroom activities. Many school media centers develop web pages that offer suggestions to parents for reading activities for at-home use. Online *Accelerated Reader* databases are often posted on these web pages, providing instant home access to the titles which are appropriate for their student’s AR book level. In addition, many schools send the weekly school newsletter to parents via e-mail. Parents and teachers may also contact each other through electronic mail messages. All of these examples show ways that computer technology improves home/school collaboration.

Zuniga and Alva (1996) report on the success of El Instituto Familiar-a parent involvement initiative. Starting with a group of ten parents in a Latino community in southern California, the program attempted to help these parents improve their parenting skills and place value on their own knowledge and skills. The successful program has now expanded to include 100 parents. As these examples demonstrate, by learning to overcome barriers, the levels of home-school collaboration and student achievement increase.

**School and Community Collaboration**

In a third area of collaboration, schools develop community partnerships with local businesses and civic organizations, public libraries and universities. Research compiled in the Alaska study shows that the test scores of students increase when the school media specialist and the public librarians have a cooperative relationship (Hamilton-Pennell, Lance, Rodney, & Hainer, 2000). Schools and public libraries work together through summer reading programs, story time programs for preschoolers, and by providing resources and services to public school teachers and students. (American Library Association, 2000). The new *Information Power* guidelines “urge us to model involvement in the learning community by networking with school staffs and neighborhood contacts and with district, regional, and national offices and organizations” (Harada & Donham, 1998, p. 5).

Community reading initiatives such as Creating Readers: Collaboration for Reading and Educational Success Through Libraries [CREATE], offer opportunities for partnerships among libraries, parents, schools and local businesses to help children learn to read (Russ, 1999). School and public library collaboration is also an important factor in the success of reading motivational programs, such as *Accelerated Reader*. The AR program is designed for collaboration involving the school, students, parents and the entire community for the purpose of motivating students to become lifelong readers (Guth & Heaney, 1998).

One of the best examples of total community involvement and commitment to reading achievement is in the community of Tifton, Georgia, “the reading capital of the world.” Beginning with one elementary school and a grant of three computers to the public library from the Tift County Foundation for Education Excellence, Inc., for its summer reading program, the collaboration process began. The *Accelerated Reader* program was chosen for use in the schools and public libraries. School media specialists and public librarians worked together to motivate students of all grade levels toward the community-wide goal of one million AR points. Businesses provided incentives for employees who participated in the AR program and contributed $110,000 to the community projects, with grants finally totaling $400,000 by the year 2000. Students were given prizes such as tickets to Atlanta Braves baseball games, pencils, caps and t-shirts. When the community reached its goal, a huge outdoor celebration was held for 5000 people who gathered at the high school stadium (Hare, 2000; Lightsey, 2000; Rankin, 2000).

The Chula Vista Project is another example of successful community collaboration for the purpose of improving reading achievement for children in families that are economically disadvantaged and highly mobile. Five
different local organizations, including a Police Athletic League and a homeless shelter, cooperated with an elementary school, a local university and a state agency, to provide opportunities for helping students. The children, who were mostly Latino, spoke little English and were economically disadvantaged. The partners helped the students improve their reading ability and their living conditions. The collaborative efforts of this urban community are responsible for the increased reading achievement among these economically disadvantaged students (Garman, Hammann, Hoodak, & Fiume, 2000).

In summary, research shows collaborative partnerships within the school and between the home, school and community improve reading scores and lead to an increase in student achievement. There are many factors, such as negative attitudes, cultural and language barriers, work schedules and feelings of alienation which inhibit these partnerships. Schools and communities must work diligently to overcome these barriers and collaborate for the benefit of student achievement. The NEA Task Force on Reading (2000) states that today’s teachers need the help and support of parents, business organizations and the community, thus stressing the importance of building and maintaining these relationships.

**Components of Successful Collaboration**

Taylor, Pressley and Pearson (2000) in the *Designs for Change* study, note the importance of strong leadership with vision as essential to improving achievement in schools. They suggest that schools should have a learning mission, supported by a strong staff, hired and coached by a principal, who is a powerful instructional leader.

Hoffman (1991) lists having a clear school mission and effective instructional leadership and practices as attributes for effective schools. To be effective, all stakeholders, including students, teachers, administrators, parents, school system and community leaders should share the school’s vision. The school leader must be an advocate for student learning, who communicates the value of cooperative decision-making, innovation and participation (Gibb, 2000). Research data for the HOPE for Urban Education study of Chicago schools identifies the leadership of a strong principal as a key factor in improved student achievement (Taylor, Pressley & Pearson, 2000).

The principal can be a strong leader in the area of collaboration by advocating the important role of the library media center (Harada & Donham, 1998), by supporting collaboration between teachers and the LMS, and by modeling teamwork skills, attending planning sessions between teachers and media specialists and ensuring that time is set aside in the daily schedule for collaborative planning (Donham, 1999). Muronaga and Harada (1999) note the important contribution a leader makes by creating leadership teams that are composed of teachers who support and practice the collaborative process (Gruenert, 2000).

To further collaborative efforts, the principal must give teachers adequate time for planning and delivering instruction that is geared to the needs of students (NEA, 2000). Gibb (2000) reports that a daily team planning time enhances the opportunities for collaboration. Common planning time can be arranged while students are at exploratory classes or as a result of block scheduling (Geiken, Larson & Donham, 1999). Common planning time and school collaboration can lead to the use of innovative teaching practices (Gable & Manning, 1999). Friend and Cook (1996) stress the importance of communication in the collaborative process. Effective speaking and active listening are critical components of successful collaboration. The strong leader models successful collaborative practices and provides training for team members in communication skills. In summary, successful collaboration requires a strong leader with vision, who can provide the direction and instructional support necessary to guide the complex collaborative process.

**Methodological Issues and Directions for Future Research**

There are several gaps in the literature on the role of collaboration in improving student achievement that need further investigation. There has been much research into the relationship between parental involvement and student achievement. However, at least two studies (Caplan, et al., 1997; National Council for Jewish Women [NCJW], 1998) indicate a need to identify the most effective parental involvement strategy for predicting student achievement. To determine the most effective parent involvement strategy, future researchers should study different types of parental involvement and discover which are the most valuable in increasing student achievement. In addition, future research needs to look at how parents, especially the growing number of working and single-parent
families can become more involved in the schools. Research should explore the use of computer technology as a means of communication for improving parental involvement and contact with the schools.

Muronaga and Harada (1999) note that there has been extensive research into the external factors of collaboration, such as budget, personnel, facilities, and flexible scheduling. These factors are extremely important to the success of a library media program. However, there are many internal factors, such as leadership, advocacy and communication that play an important role in successful collaboration. These factors, though of equal importance, have not been documented as completely in current library literature. Further research should focus on studying how collaborative relationships can work most effectively in today’s school environment, especially concentrating on the impact of computer technology, not only on teacher-media specialist collaboration, but also on collaboration with the home and the community.

Summary, Conclusions and Implications

The collaboration process is complex, requiring much hard work and commitment. It is not a process that occurs naturally in the school environment. Rather, it is a process that must be nurtured, cultivated and guided. Skillful leadership is required to fully implement the collaborative process. The success of the collaborative effort depends on a thorough understanding of group dynamics, communication and effective leadership.

Extensive research links collaboration to student achievement in many areas. In the school setting, collaboration between the classroom teacher and the media specialist allows students to become information-literate by learning to access and evaluate information. Classroom teachers collaborate with resource teachers and the media specialist through programs such as to improve reading achievement. Parents collaborate with teachers when they volunteer, assist teachers, and participate in the decision making process of various committees, such as the Reading Renaissance Council. This involvement increases the level of student achievement. Schools are reaching out to business and civic organizations in the community for support. Community-based initiatives, such as the Tifton Community Accelerated Reader project, Chula Vista, and the Family Literacy Project, have been very successful in improving reading and fostering a strong sense of community spirit. Public libraries and universities collaborate with schools to provide resources, improve reading and prepare pre-service teachers for their role as future educators. In each of these collaborative efforts, the goal is improved student achievement.

Conclusions

Collaboration can result in improved learning and increased student achievement. Extensive research in statewide studies such as those conducted in the library media programs of Colorado, Alaska and Pennsylvania confirm the success of the collaborative relationship. Teachers increase their effectiveness and become more innovative when they collaborate. Their sense of isolation is lessened as they work together to improve student learning outcomes. Collaboration between the teacher and the media specialist can improve reading achievement, and help students to be information-literate citizens, who have learned to make informed decisions from the wealth of information at their fingertips. Collaboration is an ongoing, complex process that should be nurtured and guided to provide additional opportunities for increased student achievement.

As more and more minority students join the student population in schools, efforts need to be made to include these parents and students as valued members of the school family. Community partnerships with business and civic organizations should be built and maintained, as schools are no longer able to take care of students completely on their own. New computer technologies should be explored to see how they can improve collaboration and communication between the home, school and community.

Collaboration offers a team approach to problem solving and decision making. The purpose of this paper has been to explore internal factors of collaboration, such as group dynamics, leadership and communication. After a thorough review of the literature related to collaboration, the author suggests that further research needs to be conducted into the role these factors play in the collaborative process. Future research should also explore how computer technology can be used to improve student achievement and increase the level of communication between the home, school and community.
References


