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THE DEVELOPMENT, IMPLEMENTATION, AND SUSTAINABILITY OF PROFESSIONAL COLLABORATION FOR SPECIAL EDUCATION: A SOCIOCULTURAL PERSPECTIVE

By

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As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Lorri M. Johnson Santamaria

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and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy Ph.D. Special Education, Rehabilitation, and School Psychology

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Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

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ABSTRACT

The purpose of this inquiry was to investigate the development, implementation, and sustainability of collaborative educational practices among special educators, general educators, and members of a university community. Defining characteristics of collaboration in schools (Friend & Cook, 2000), sustained practices (Gersten, Chard, & Baker, 2000; Gersten & Vaughn, 1997), and a rubric developed from features of Vygotsky's (1978) zone of proximal development (ZPD), create an integrated framework that guides and informs the study. The ultimate outcome goals of the study were to determine: (a) how collaboration functioned during the time of initial intensive support, (b) how collaboration was sustained after initial intensive supports were removed and (c) ways in which the ZPD informed and sustained collaboration throughout the study.

A two-phase case study design was utilized for this study. In Phase I educators participated in a four-month long collaboration project with the goal of integrating students from a Kindergarten-1st grade bilingual cross-categorical special education classroom into a bilingual 1st grade classroom. During this implementation period, the teachers, specialists, paraprofessionals, administrators, and university collaborators provided on-going collaboration and support to one another. Phase II consisted of a three year follow-up period investigating the bilingual special education classroom, in which intensive formal support from the university collaborators and administrators was no longer directly provided. The research methodology utilized for this study was qualitative. Data sources used to obtain information for the analyses included: Phase I, focus group interviews, teacher journal entries, observations, and teacher lesson plans;

Phase II: follow-up interviews, classroom observations, and supporting documents (i.e., intern journal entries, analytic memos, district documents). Analysis of the data revealed that during the implementation phase novice teachers were provided with a collegial support network, there were cross-training opportunities for all participants, focus group interviews fostered participant collaboration, teacher resources were reallocated, and power differentials among participants were redistributed.

Findings for the second phase of the study indicate that although collaboration was sustained after the initial four-month intervention for more than three years, it varied considerably from the onset of the original intervention. Formal and informal partnerships among the participants strengthened and sustained collaboration, especially those linking the university to the classroom. Based upon the rubric developed, evidence of participants' operating within Vygotsky's (1978) zone of proximal development informed both the sustainability (Gersten & Vaughn, 1997) and collaboration (Friend & Cook, 2000) frameworks. This finding has implications for integrating sociocultural theory into future research studies that involve special and general educators and learners in culturally and linguistically diverse learning environments.

CHAPTER 1

INTRODUCTION

This chapter provides an overview of the study including the rationale for the inquiry, the statement of the problem, purpose of the study, the limitations of the study, and definitions of key terms.

Rationale of the Study

The Individuals with Disabilities Educational Act (IDEA), requiring that states provide a free appropriate public education to students who qualify, also suggests that education be individualized to the learner's particular needs (1997). Adding to the legal dimension is the increasing cultural and linguistic diversity of the United States, which makes individualized appropriate education a unique challenge for teachers working with students receiving special education services. Educational stakeholders including teachers and parents, agree in principle to the recommendations delineated in IDEA, yet the ways in which these ideals are to be realized remain unidentified. To this end, administrators, classroom teachers, and parents seek research-based strategies from leaders in special education research.

Ironically, implications for both general and special educators that come as a result of IDEA reflect an increased emphasis on educational outcomes for all children with disabilities. "This emphasis creates increased opportunities for collaboration" (Huefner, 2000, p. 195) as a viable option for IDEA compliance. IDEA poses new challenges for both general and special education teachers, because many may feel burdened by the high expectations for collaboration suggested by the act. According to

IDEA, general educators are to be directly involved in activities that have primarily been the responsibility of special educators in the past. These professional collaborative responsibilities include: participation in the process of achievement testing for all students regardless of disability, the creation of measurable annual goals, writing progress reports to parents, ensuring opportunities for mandatory student participation in the general curriculum; and a continuation of providing least restrictive environments (LRE) for all learners. In accordance to special education law, state and local administrators have collaborative responsibilities as well as teachers, children and their parents. When considering collaborative teaching practices for diverse learners in special education programs, IDEA compliance becomes even more challenging.

In the early 1990's, Cook and Friend (1991) predicted, "greater diversity among students coupled with dramatic increases of specialized knowledge in the disciplines will necessitate more collaboration and sharing of expertise among school professionals" (p. 26). More recently, the same authors and others conducting professional collaboration research in special education identify critical factors contributing to the overall success of teachers (Friend & Cook, 2000; Harris, 1995; O'Shea & O'Shea, 1997; Pugach & Johnson, 1995; Salend, Dorney, & Mazo, 1997). O'Shea, Williams, & Sattler (1999) further support these findings by stating that professional "collaboration skills are key to effectiveness and teaming" (p. 147).

According to professional collaboration advocates, teachers who are most effective interact regularly with others in the decision making process, have positive relationships with parents, colleagues, learners in their classrooms, and other members of

their school communities and work with, rather than insulated from, others (Andrew, 1997; Darling-Hammond, 1998; Goodlad, 1994; Hudson &Glomb, 1997; Manouchehri, 1997; National Board for Professional Teaching Standards, 1994; National Commission on Teaching and America's Future, 1996; Slavin, Madden, Dolan, & Wasik, 1996). In addition, effective teachers "believe in diversity, meeting individual needs, and interacting with others to support shared decision making," (O'Shea et al., 1999, p.147).

Effective teacher belief in diversity and meeting the individual needs of children in collaborative teaching environments are crucial in addressing the challenges presented by the cultural diversity present in our country (Harris, 1998). Diversity has implications for all aspects of education including the education for children who are English language learners (ELL) and children who qualify for special services under IDEA. The Council for Exceptional Children (CEC, 1994) reported that although children who are ELL or African-American constitute almost one half of the total school population, they are represented disproportionately in the mental retardation and emotional disturbance categories, respectively (Artiles, 2000; Artiles & Trent, 1997; Ford, 1998, Patton, 1998).

The role that professional collaboration can play in addressing diversity related issues in special education has been addressed recently in collaboration literature making professional collaboration even more relevant for today's changing U.S. classrooms (Delgado, 1994; Dettmer, Dyck, & Thurston, 1999; Fradd, 1991; Friend & Cook; 2000; Harris, 1998; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; Ortiz & Garcia; 1995;Vaughn, Bos & Schumm, 2000, Walther-Thomas, Korinek, McLaughlin, & Williams, 2000). In a recent study, O'Shea, Williams, and Sattler (1999) found that

effective teachers are cognizant of the new challenges that are presented by the changing demography of the United States and through professional collaboration can be successful in meeting and overcoming those challenges.

Although researchers are able to identify effective teaching practices such as professional collaboration, they are rarely able to capture the development, implementation, and sustainability of such practices (Englert & Tarrant, 1995). Sustainability of research-based practices is at the forefront of national educational policy in that school districts and State Departments of Education are focused on how research-based practices, such as professional collaboration, are implemented and sustained after the initial research is completed (Vaughn, Klinger, & Hughes, 2000). The relationship between improved classroom practice and education related research on professional collaboration is ambiguous and hard to discern (Reese, 1999). When research-based practices do find their way into classrooms, implementation is poor (Cuban 1996; Ellmore & McLaughlin, 1988; Kennedy, 1991), and it is not sustained over time (Fuchs & Fuchs, 1998; Mastroprieri & Scruggs, 1998). These findings come in part from teachers' unwillingness to depart from "old" ways of thinking in order to apply new teaching strategies or procedures such as professional collaboration and the resources needed to support the implementation and sustainability of the practices.

McLaughlin (1990; 1991; 1994) states that a research-based practice is effective if its use has been consistent and sustained by classroom teachers over a period of several years. This finding is noteworthy in light of the recent identification of sustainability of research-based practices as a major priority area by the Office of Special Education

Programs of the U.S. Department of Education (Gersten, et al., 2000). Determining the degree to which research-based practice is being implemented in classrooms would be beneficial to special educators (Kaufman, 1993) particularly since funding for such programs is vulnerable to budget cuts without proof of effectiveness by means of empirical research findings (Gersten & Vaughn, 1997). Research in the area of the sustainability of research-based practice has demonstrated that the sustained uses of these practices are not guaranteed and as a result, general principles that promote sustainability have been developed (Gersten, et al., 2000; Gersten & Carnine, 1990; Woodward & Gersten, 1992; Woodward, 1993).

In regard to special education research and the sustainability of research-based practices, "it is likely that the focus on the individual in isolation from the social context is related to the strong influence of early medical underpinnings of special education" (Rueda, Gallegos, & Moll, 2000, p. 71). This narrow focus has limited the scope of special education research. It does not consider the myriad of factors and multiple variables surrounding the learners in question and ways in which a more holistic or sociocultural perspective may inform the manner in which education can become more individualized and appropriate for all children. Researchers conclude that if sociocultural perspectives were employed in special education research, expanded views of special education research could be considered as well as perspectives that better complement the aforementioned cultural and linguistic diversity found in U.S. classrooms (Artiles, 2000; Artiles, 1998; Artiles, Trent, & Kuan, 1997; Baca & Cervantes, 1998; Bos & Fletcher, 1997; Fletcher, Bos & Johnson, 1998; Keogh, Gallimore, & Weisner, 1997; Harry &

Rueda, 1999; Johnson Santamaría, Bos, & Fletcher, in press; Ruiz & Rueda, 1995; Rueda et al., 2000; Salend, Dorney, & Mazo, 1997).

Statement of the Problem

Even though professional collaboration is fraught with inconsistent research findings, major calls for research on collaboration of this type comes from local, state, and federal leaders urging the investment in and respect for teacher activities that support classroom teaming (O'Shea, et al., 1999). Some research findings reveal the value of professional collaboration and the fact that effective teachers collaborate (Mastroprieri & Scruggs, 2000; O'Shea, et al., 1999), while others describe the limited impact of professional collaboration on the broader field of education (Audette & Algozzine, 1997). Based on their more current research findings, Audette and Algozzine (1997) are convinced that the limited impact of classroom professional collaboration and innovation efforts are based on two key problems: (a) the encouragement of local schools to adopt "best" practices without knowledge of the theories behind them, and (b) educators rarely having time or energy for professional development opportunities that teach child development theory and innovative teaching and learning methods. Furthermore, few findings describe how professional collaboration goals are developed or the processes that lead to effective professional collaboration, particularly the construction of professional collaborative communities that serve learners with special needs (Englert & Tarrant, 1995; Harris, 1995; Salend, et al., 1997b).

Further impacting the problem, there is much to be learned about the specific ways in which teachers apply research-based practices, the conditions which enhance

their long-term use of those practices, and the process and evolution of these practices over time (Vaughn et al., 2000). In other words, as stated by Gersten et al. (2000), "research that systematically analyzes and elucidates the factors that sustain classroom use of research-based practices has become a paramount need in special education" (p. 445). Surprisingly, there has been only one empirical study featuring sustainability in special education (Klinger, Vaughn, Hughes, & Arguelles, 1999). In regard to the development, implementation and sustainability of such research-based practices as collaboration, there is not only a lack of research that addresses these issues but also a lack of research that describes the types and scope of adaptations made by teachers using new methods and the effect of these practices on student learning (Gersten, et al., 2000; Gersten & Vaughn, 1997; Vaughn, et al., 2000). Questions posed by Gersten & Vaughn (1997) reiterate this specific call for research that has special education as its focus. Their questions include ways in which interventions can be designed to improve the likelihood of their adoption, why the lack of sustained implementation of research-based practices, how researchers can best come to understand and address the needs of teachers, students, and their families, and ways in which researchers, practitioners, and their families can create relationships that support the sustainability of research-based practices.

Addressing the general need for multiple perspectives in special education research, Rueda, Gallego, and Moll (2000) propose one of the few sociocultural perspectives applied in special education research (Artiles, Trent, Hoffman-Kipp, & Lopez-Torres, 2000; Artiles, et al., 1997; Bos & Fletcher; 1997; Keogh, et al., 1997; Ruiz

& Figueroa; 1995). In regard to research in this area, Artiles, Trent, & Kuan (1997) argue it "must be broadened conceptually to transcend the view of disability and cultural diversity as intraindividual phenomena" (p.80). They go on to propose sociocultural perspectives based on views of human development, learning and learning disabilities, that incorporate personal characteristics and mediating roles that are present in contexts that are sociocultural (Artiles, et al., 1997). Furthermore, in light of the ever-changing cultural and linguistic climate that affects all aspects of education, the development of sociocultural approaches to special education research endeavors are crucial if educators are to seriously consider the inclusive ideals presented in IDEA (1997).

Thus, in response to multiple calls for special education research, what is clearly lacking are studies that investigate the development, implementation, and sustainability of professional collaborative practices in educational settings using sociocultural approaches. Inquiries such as these would complement current findings in the areas of collaboration, sustainability, and sociocultural theory applications in special education.

Purpose of the Study

As maintained by Artiles (2000), "researchers need to trace the influence of shared experiences and sustained reflection on the transformation of learning communities engaged in collaborative work that aims to identify cultural tools that lead to transformative practice" (p. 83). Here, the author clearly calls for qualitative research studies that address the development, implementation, and sustainability of professional collaboration in special education as well as the need to identify conceptual frameworks explaining the interactions between disability and sociocultural variables (Artiles, Trent,

& Kuan, 1997). In response to calls for special education research such as these, which consider the sociocultural aspects of those involved in special education contexts, sociocultural theory will be integrated throughout the present study.

A qualitative study was conducted because as Merriam reports such studies are "intensive, holistic description(s) and analys(es) of bounded phenomenon" (1998, p.xiii). In this case the "bounded phenomenon" was the professional collaboration that resulted from a collaboration project designed to meet the needs of two primary classrooms serving English language learners; one with children with disabilities and the other without. The ultimate goal was to inform the "process," and later sustainability, of collaboration as a means of meeting the needs of learners with disabilities.

In investigating the collaborative effort over time, special education literature and frameworks drawn from collaboration, sustainability, and a rubric developed using features of the ZPD from sociocultural theory, were considered in developing and addressing the research questions. The major research questions addressing the outcome goal of this two-phase inquiry were:

1. In relation to the research-based framework for best practices for collaboration, how did collaboration function during the time of initial intensive support (Phase I)?
2. In relation to the research-based framework for best practices for sustainability, how was collaboration sustained after initial intensive supports were removed (Phase II)?

3. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) inform:

    (a) collaboration from the time of initial intensive support (Phase I) and

    (b) after initial intensive supports were removed (Phase II)?

Significance of the Study

The significance of the present study is to contribute to the limited literature on the development, implementation, and sustainability of professional collaboration for learners who may have disabilities, adding a critical dimension to special education research by integrating a sociocultural perspective. This study addresses the rarity of collaborative teaching practices implemented and sustained in classrooms nationwide and may explain why the historical record of the impact of collaboration in education is so bleak (Fullan, 1991). Adding a sociocultural perspective to existing collaboration and sustainability frameworks may deem these practices more useful and applicable to a wider and perhaps more diverse population.

Limitations of Case Study Research

As Merriam (1998) states, "all research designs can be discussed in terms of their relative strengths and limitations" (p. 40). In regard to case study research, findings are difficult to generalize from one case to another for several reasons, the first of which is the use of a small sample size. Secondly, according to Biddle and Anderson (1986), case studies are not objective in that "investigators inevitably come to the case study with a unique background that includes related experiences, ideological commitments, and

interests in certain issues and concepts" (p. 238) which may affect their reporting of events. Thirdly, as Guba and Lincoln (1981) maintain, it is difficult to ascertain whether or not a case study has "oversimplified or exaggerated a situation, leading the reader to erroneous conclusions about the actual state of affairs" (p. 377). And lastly, Hamel's (1993) observations in regard to the limitations of case study research which discuss the case study as being faulted for its "lack of rigor" (p. 23), that he links to bias and the subjectivity of the researchers. These limitations must be taken into consideration when generalizing the results of any case study research endeavor.

Definition of Terms

Professional Collaboration. Professional collaboration is a style for direct interaction between at least two co-equal professionals in education voluntarily engaged in shared decision-making as they work toward a common educational goal (Friend & Cook, 2000). Collaboration of this kind is generally limited to practitioners involved in providing educational services to learners in school settings. It may involve administrators and other members of the professional educational community. For the purposes of this study professional collaboration does not include parents.

Sustainability. Traditionally for disciplines such as medicine, environmental science, and ecological systems management, sustainability has been the maintenance of a particular mode, making use of available resources, without damaging the environment for the time being observed or in the future (Rees, 1998). Sustainability in general and special education research is the implementation of a routine that results in more effective outcomes for the population being served over a period of several years (Gersten, et al., 2000; Gersten & Vaughn, 1997; McLaughlin, 1991; Vaughn, et al., 2000).

Sociocultural theory. Sociocultural theory proposes "learning and development as a dynamic process of transformation in a given community of learners" (Rueda, et al., 2000, p.72). According to Rogoff (1997), research that relies on sociocultural theory answers questions that relate to the activities in which people participate, why they participate in those activities, who they participate with, the resources they use in order to participate, the roles of individual, activity, and purpose transformation, and the ways in

which the past, present, and future interrelate and effect one another as related to the activity being investigated.

The Zone of Proximal Development (ZPD). As maintained by Vygotsky (1978) "...the distance between the actual developmental level as determined through independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86) commonly associated with sociocultural interactions.

English language learners. Individuals who speak a native language other than English; some individuals may be limited English proficient (LEP), while others are fully fluent in English. The term English language learner (ELL) is often used synonymously with culturally and linguistically diverse (CLD) (Buxton & Escamilla, 1999).

CHAPTER 2

REVIEW OF THE LITERATURE

Chapter Two is a literature review relevant to the present study. The first section provides expanded definitions and an overview of the features and best practices for collaboration in special education contexts for diverse learners. The second section provides the same information regarding best practices for sustainability in special education. The third section provides a review of literature that describes sociocultural theory, collaboration in sociocultural research endeavors, and features of the zone of proximal development.

Collaboration in Special Education

In their seminal work, which describes research-based collaboration in special education, Cook and Friend (1991) state, "collaboration has emerged as a popular, perhaps overused, term to describe a wide range of services and activities in special education" (p. 24). Special education research suggests that collaboration is a factor in service delivery models for many types of students with a wide range of disabilities from mild to severe, including children who have been traditionally known to be at risk for school failure (Baca & Cervantes, 1998; Cook & Friend, 2000; Harris, 1998; Salend, et al., 1997b; Stainback & Stainback, 1996). Although researchers who focus on special education issues find that collaboration is a necessary component in service delivery models designed to meet the needs of children with disabilities (Cook & Friend, 2000; Harris, 1998; Kampwirth, 1999; Mastroprieri & Scruggs, 2000), there are many definitions for and features of collaboration that capture its essence in special education

contexts. These definitions and features yield global best practices, which can be applied and generalized to most school settings (Audette & Algozzine, 1997; Englert & Tarrant, 1995; O'Shea, et al., 1999; Stanovich, 1996).

The complexity added when considering diverse learners receiving special education services make the need for explicit information regarding collaboration in meeting the needs of these learners increasingly necessary (Baca & Cervantes, 1998; Harris, 1998; Salend, et al., 1997b). This comprehensive investigation of existing knowledge on the features of collaboration in special education research and the best practices for collaboration in special education from a sociocultural perspective are worthy of consideration as a foundation for contributions to existing knowledge in the area.

Features of Collaboration in Special Education

"In our efforts to define the specific skills, attributes, and dispositions that teachers of the twenty-first century will need, there is a compelling rationale to include training in collaboration and teaming as an integral component of pre-service and in-service programs for all educators" (Coben, Chase-Thomas, Sattler, & Morsink, 1997). Assuming that this conclusion from a research synthesis on collaboration in special education is correct, a description of the features of collaboration for learners with disabilities is necessary.

Features of collaboration in special education include characteristics, components, and frameworks drawn from research syntheses, policy and position papers, research endeavors, and professional literature. Policy and position papers authored by O'Shea

and O'Shea (1997) and Audette and Algozzine (1997) were reviewed as well as descriptive research syntheses by Stanovich (1996) and Coben, Chase Thomas, Sattler, and Morsink (1997). The seminal works of Friend and Cook (1991,2000) serve to further inform the features of collaboration in special education. Special education research contributions of O'Shea, Williams, and Sattler (1999); Salend, Johansen, Mumper, and Chase (1997a); Salend, Dorney, and Mazo (1997b); Englert and Tarrant (1995); Harris, (1995); and Pugach and Johnson (1995) were considered. In addition, features and frameworks were drawn from the professional literature authored by Friend and Cook (2000); Mastroprieri and Scruggs (2000); Walther-Thomas, Korinek, McLaughlin, and Williams (2000), Dettmer, Dyck, and Thurston (1999), Lewis & Doorlag, (1999), Vaughn, Bos, and Schumm, (2000), and Thomas Kampwirth (1999).

In 1997, specialists in the field of special education composed two major position papers featuring collaboration (Audette & Algozzine, 1997; O'Shea & O'Shea, 1997). Complementing IDEA 1997, these documents transformed collaborative practices from enhancements of special education service delivery to mandates for educators of learners with special needs. One proposed a re-invention of special education (Audette & Algozzine, 1997), while the other made a case for collaboration and school reform practices for the new millennium (O'Shea & O'Shea, 1997). Audette and Algozzine (1997) discussed problems relating to special education in the United States and factors that contribute to the failure of the implementation of legislation to meet the learning needs of students with disabilities. In this document, they view collaboration as a hallmark of school reform, address negative attitudes about students with disabilities, and

discuss problems on the actual definitions of disability classifications. O'Shea & O'Shea (1997), on the other hand, discuss the integration of collaboration and school reform in the United States including factors that affect changes upgrading public education. They also examined the objectives of school reform activities, national goals that help in defining assessment and programming models, and federal legislation related to restructured school curricula and service delivery systems.

Regarding the features of collaboration, Audette and Algozzine (1997) include administrative support as being key to professional collaborative endeavors. In this piece they assert, "true collaboration requires leadership" (Audette & Algozzine, 1997, p. 383), and urge educational leaders to promote free and appropriate educational opportunities for all children. Shared decision making is a feature of collaboration mentioned by the O'Sheas' (1997), as they consider collaboration and school reform integral socio-political components of Federal legislation. Rather than specific features, they propose twelve predictions for the twenty-first-century that consider collaboration. Predictions that impact features of professional collaboration are: (a) technology will shape the collaboration format, (b) family diversity will change professionals' roles, and (c) student diversity will affect professionals' roles (O'Shea & O'Shea, 1997). These predictions are addressed in the later research of Harris (1995) and Salend et al., (1997b).

In Stanovich's (1996) earlier description of collaboration as a key to successful instruction, she describes the nature of collaboration in an inclusive classroom and the types of collaborative relationships that assist general education teachers in teaching students with a variety of disabilities. She describes the characteristics of collaboration in

light of the general education teachers' relationship with special education teachers, the roles that parents play in children's education, the general educators' relationships with paraprofessionals, and the role of the principal as a support or hindrance to collaboration efforts among general and special educators.

As maintained by Stanovich (1996), general education teachers are key to the successful integration of students with special needs into the general education classroom because of their ability to form a broad network of support services for themselves and their students. Because general educators sometimes do not feel comfortable forming collaborative partnerships, principals play an important role in supporting collaborative activities among their staff members; therefore the leadership of a strong individual is crucial for these partnerships to develop. These findings foreshadow the leadership component of collaboration later mentioned by Audette & Algozzine (1997). Stanovich (1996) also claims that practicing professionals could profit from professional development activities designed to assist them in developing attitudes and skills needed for successfully implementing collaboration and concludes that future generations of teachers could be assisted by collaboration and consultation components added to their pre-service teacher education programs (Coben, Chase-Thomas, Sattler, & Morsink, 1997; Stanovich, 1996).

In their practical consideration of collaboration as it interfaces with consultation, Coben, Chase-Thomas, Sattler, & Morsink (1997), describe consultation, collaboration, and teaming models that have been implemented discussing their strengths and limitations, delineating how these models contribute to interactive teaming. From their

literature review they found that over the past 20 years, professionals from various disciplines have been advocating for variations of consultation, collaboration, and teaming models among educators as the most effective way to improve service delivery to students with disabilities (Coben, et al., 1997). A review of the literature reveals extensive information supporting collaboration (e.g., Friend & Cook, 2000; Pugach & Johnson, 1995; Salend et al., 1997; Walther-Thomas et al., 2000).

The most prominent feature or aspect of collaboration that these authors bring to this body of knowledge is an agreement with Stanovich's (1996) position on teacher education models in regard to pre-service teachers. "It can be concluded that teacher training programs in special education must begin to systematically include consultation, collaboration, and teaming skills in their curricula" (Coben et al., 1997, p. 429).

Most recently, Friend and Cook (2000) ventured to establish a framework for considering the multiple and oftentimes contradictory perspectives of collaboration. Their work includes an exhaustive review of the literature that incorporates practical ideas and the impact of IDEA 1997 in examining the ways teams of school professionals can work together to provide a complete range of services to learners with special needs. It is from these authors the term "professional collaboration" is borrowed in reference to those individuals who are working as a team as part of a service delivery model. Collaboration is referred to as a style of teaching that has characteristics, elements, and principles.

The characteristics of effective collaboration as described by Friend and Cook (2000) are as follows: (a) collaboration is voluntary, (b) individuals who collaborate

share a common goal, (c) collaboration requires parity among participants, (d) collaboration includes shared responsibility for decisions, (e) individuals share accountability for outcomes, and (f) collaboration includes sharing resources. The elements of collaboration which were first described in the early nineties, are that if collaboration is to be successful: (a) professionals must trust one another, (b) their trust must grow, (c) they must believe that their time and effort is worthwhile, and (d) they must believe that this "style" will become stronger (Friend & Cook, 1991, p. 8). Finally the authors delineate principals that clarify how collaboration functions. These principles are: (a) collaboration as a style may exist in almost any school program, (b) collaboration in schools may occur informally as well through organizational methods, (c) collaboration requires time to develop, (d) collaboration is not a panacea, and (e) collaboration may raise ethical issues. The characteristics, elements, and principles provided by Friend and Cook form a working framework for professional collaboration research and practice.

Research based features of collaboration are derived for the most part on qualitative research. Three important studies from the mid-nineties set the tone for research in the area that has practical applications for collaborative partnerships between general and special educators. One study investigated the creation of collaborative cultures (Englert & Tarrant, 1995); the second investigated the establishment of collaborative bilingual special education teams and collaboration across disciplines (Harris, 1995), and the third considered peer collaboration (Pugach & Johnson, 1995).

In the descriptive study conducted in Michigan by Englert and Tarrant (1995), participants included four teachers, three senior researchers, and four doctoral students, all members of a school/university community that led to the development of the curriculum for the Early Literacy Project (Englert, Raphael, & Mariage, 1994). In the Southwest, Harris (1995) engaged bilingual resource teachers, bilingual education teachers, specialists in speech and language, English as a second language (ESL) teachers, and principals in one elementary school and one middle school in order to study ways in which collaborative partnerships were developed. Pugach and Johnson (1995) on the other hand, engaged an intervention group of ninety-five teachers and a comparison group of ninety-six in the Midwestern U.S. for a qualitative and quantitative inquiry. Members of the first group in this study received training in peer collaboration and agreed to use the process to solve three or four problems throughout the school year. Data for the investigation consisted of the number of referrals in a school year, a demographic questionnaire, and several surveys.

Englert and Tarrant (1995) found that "profound changes result when collaborative partnerships are formed between universities and schools that bring teachers and researchers together for the purposes of conducting inquiry ..." (p.325). From their work they also learned that discourse in the learning community provided a public space where participants constructed new literacy meanings.

Three guidelines for collaborative bilingual special education teams emerged from Harris' (1995) work. These guidelines are helpful in thinking about how ways in which serving the special needs learners of a diverse population differ from serving

learners who represent the mainstream (Harris, 1998). The first guideline involves team membership representing a variety of disciplines. Team members from different disciplines bring different perspectives to the collaborative process and may have complementary skills for working with culturally and linguistically exceptional learners. The second guideline encourages collaborators to be flexible and allow models of collaboration to evolve over time (Harris, 1995). The third guideline cautions participants to be prepared to address issues involving the viability of the team (Harris, 1995).

The findings of Pugach and Johnson (1995) differ in that they discovered teachers receiving peer collaboration training substantially reduced their referrals to special education and became more confident in addressing problems. This training prepared participants with strategies and tools that they needed in order to succeed in collaborative teaching arrangements.

These studies reveal peer interaction ranging from informal to formal, as an important feature of collaboration in meeting the needs of learners in special education. Englert & Tarrant (1995) investigated planned discussion groups, Harris (1995), conducted her inquiry by observing and interviewing participants who worked together in action, while Pugach & Johnson (1995) offered participants peer training for course credit for their study.

In one of two studies conducted and lead by Salend (Salend, Johansen, Mumper, Chase, Pike, & Dorney, 1997a; Salend, Johansen, & Mazo, 1997b) affiliates of the State University of New York, considered the perceptions of a bilingual cooperative teaching

team and the evolution of their relationship, through the use of an open ended non-directed dialogue journal. These case studies had at their focus two bilingual teachers: one general and the other special education. The study of this bilingual cooperative teaching team, yielded two articles (Salend, et al., (1997a; 1997b). Findings from the first study reveal that collaborative teaching served to make teaching more enjoyable and stimulating, allowing teachers to experiment with new teaching methodologies. The second study took a more in depth perspective investigating the teachers' roles as a cooperative teaching unit in light of bilingual versus special education. This study added a substantial review of the literature related to both areas and discussed ways in which they interface.

The late nineties produced yet another qualitative study with collaboration at its focus, which also considered collaboration across special and general education (O'Shea, Williams, & Sattler, 1999). This study engaged one hundred and three pre-service teachers who were enrolled in 2 courses on collaboration. The pre-service teachers then participated in additional collaboration activities for 15 weeks. These classes and activities included team-building exercises, effective communication techniques, and strategies for team-teaching. The teachers were later interviewed both individually and in focus groups. From this study the authors concluded that it is beneficial for pre-service teachers to receive explicit knowledge regarding collaboration in terms of the difficulty new teachers have in understanding effective participation in collaborative communities.

The first two studies were in response to the authors' claim that "future research based on voices and real-life experiences of educators involved in cooperative teaching is

needed to document and compare the experiences of other cooperative teaching teams and to identify the obstacles they encounter as well as solutions they employ to overcome barriers to successful teaching efforts" (Salend, et al., p.10, 1997a). The third considered the impact of participants'' participation in courses on collaboration and structured participation in collaboration activities (O'Shea, et al., 1999).

The findings of Salend (1997a; 1997b) and his team of researchers support features of collaboration that are evident in the literature (Friend & Cook, 2000). O'Shea et al. (1997) also concluded that teaming strategies should be taught early in teachers' careers as have other researchers. In addition, all found diligence, consistent planning, and commitment to be among the most prominent features of collaboration (O'Shea, et al., 1997; 1999; Salend, et al., 1997a; 1997b;Walther-Thomas, et al., 2000).

Teamwork, comprehensive planning, effective leadership, adequate resources, continuous education, cooperation, effective communication, and shared problem solving, are among the features of collaboration for meeting the needs of learners with disabilities noted by those who favor inclusion (Lewis & Doorlag, 1999; Mastroprieri & Scruggs, 2000; Walther-Thomas, et al., 2000). Vaughn and her colleagues (2000) expand these features to include culturally and linguistically diverse learners who may also be at-risk. Where Dettmer, Dyck, and Thurston (1999) find important features of collaboration to include co-teaching and co-planning as key to collaboration, Kampwirth (1999) finds communication and a "systems" approach to be important features. Cook and Friend (2000) provide the most complete and comprehensive list of characteristics, elements, and principles for professional collaboration that incorporate many of the findings of

current research in the area. Their framework incorporates the features for collaboration found in policy and position papers (Audette & Algozzine, 1997; O'Shea & O'Shea,1998;), descriptive research syntheses (Coben, et al., 1997; Friend & Cook, 2000; 1991; Stanovich, 1996), qualitative research (Englert &Tarrant, 1995; Harris, 1995; O'Shea, et al., 1999; Pugach & Johnson, 1995; Salend, et al.,1997a; 1997b;), and finally those found in professional literature (Friend & Cook, 2000; Dettmer, et al.,1999; Kampwirth, 1999; Lewis & Doorlag; Mastroprieri & Scruggs, 2000; Vaughn, et al., 2000; Walther-Thomas, et al., 2000).

In sum, the professional special education literature reviewed supports continuous support, education, and professional development in regard to collaboration for educators in special education. Effective leadership is almost as prominent a feature with comprehensive planning, teamwork, and effective communication following closely behind. Cooperation and parity among participants, shared responsibility for both decision making and problem solving, as well as shared common goals and accountability are next most prominent features of collaboration in special education followed by attention to family and student diversity. Additional features cited by Friend & Cook (2000) were: collaboration is voluntary, makes use of shared resources, occurs in an environment where there are trust, commitment, and an inherent belief in the process of collaboration. In summary, these features impact and inform best practices for collaboration in special education.

Best Practices for Collaboration in Special Education

Features of collaboration drawn from special education research on collaboration yield global best practices, or practical applications of collaboration, that can be generalized to most school settings. Appealing to a general audience, few of these authors give specific guidelines, recommendations, or best practices for collaboration that consider diverse learners (O'Shea & O'Shea, 1998; Pugach & Johnson, 1995; Salend, et al., 1997a; 1997b), and although most professional special education literature include considerations for these learners, only some have chapters that directly provide strategies and solutions for them (Baca & Cervantes, 1998; Dettmer, et al., 1999; Friend & Cook, 2000; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; Walther-Thomas, et al., 2000; Vaughn, et al., 2000). The most comprehensive work that informs best collaboration practices for diverse learners with special needs comes from the qualitative research of Harris (1995; 1998) and Salend, Dorney, & Mazo (1997b). In this section, best global practices will be reviewed, followed by best practices for diverse learners in special education settings.

Drawn from the collective works of the literature reviewed, best global practices for collaboration in special education can be summarized by the following: (a) established general and special education teacher teams, (b) collaboration training opportunities for participants, (c) the support of administration or leadership, (d) consistent planning opportunities, (e) opportunities for open authentic communication, and (f) the establishment of collaborative partnerships between universities and schools. In reference to the establishment of professional collaboration at school sites Friend &

Cook (1991) contend, "school professionals must identify and clarify the program, evaluate the appropriateness of the program, and assess whether situational factors will support a collaborative effort" (p. 10).

Complementing global best practices for collaboration in special education, Harris (1995) developed several competencies for special and general education collaborators working with diverse learners. They are as follows: (a) teachers understanding their personal perspectives about those who are culturally diverse, (b) the use of effective communication and problem-solving skills, (c) understanding their roles in the collaboration process, and (d) using appropriate evaluative and instructional methods. Harris (1995) maintains that collaborative teams in special education where membership is bilingual as opposed to monolingual may produce culturally appropriate teaching competencies and increase trust among members.

Salend et al. (1997) also discovered complementary best practices in their case study featuring a general and special education collaborative teaching team. First and foremost these authors reiterate the importance are of collaboration efforts that are supported and developed by school administrators and teacher education programs. In regard to pre-service bilingual teachers, they express the discovery of "real omissions in the preparation of general and special education teachers" (Salend, et al., 1997b, p. 62). Bilingual special educators should not be perceived as generalists who can solve all of the challenges that face both general and special educators involved in collaborative teaching arrangements (Salend, et al., 1997b). These efforts, they conclude, cannot succeed without the support of the "larger education community" (p.62).

Based on the review of collaboration research in special education along with the professional literature, features and best practices can be delineated. Table 1 provides a list drawn from the literature reviewed.

Table 1

Features and Best Practices for Collaboration in Special Education

Features and Best Practice(s)	Author(s)
1. Open authentic communication and problem solving	(Audette & Algozzine, 1997; Coben, et al., 1997; Cook & Friend, 2000; Dettmer, et al.,1999; Harris, 1995; 1998; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; O'Shea & O'Shea, 1997; Salend, et al., 1997a; 1997b; Stanovich, 1996; Vaughn, et al., 2000; Walther-Thomas, et al., 2000)
2. Teacher teams	(Audette & Algozzine, 1997; Coben, et al., 1997; Cook & Friend, 2000; Dettmer, et al.,1999; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; O'Shea & O'Shea, 1997; Salend, et al., 1997a; 1997b; Stanovich, 1996; Walther-Thomas, et al., 2000)
3. Administrative leadership and support	(Audette & Algozzine, 1997; Dettmer, et al., 1999; Friend & Cook, 2000; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; Salend, et al., 1997b; Stanovich, 1996; Walther-Thomas, et al., 2000)
4. Collaborative partnerships among schools and universities	(Cook & Friend, 1991; Dettmer, et al.,1999; Englert & Tarrant, 1995; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; O'Shea, et al., 1999; Vaughn, et al., 2000; Walther-Thomas, et al., 2000)
5. Consistent planning opportunities	(Cook & Friend, 2000; Dettmer, et al.,1999; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; O'Shea, et al., 1999; Vaughn, et al., 2000 Walther-Thomas, et al., 2000)
6. Collaboration training opportunities	(Coben, et al., 1997; Dettmer, et al.,1999; Kampwirth, 1999; Mastroprieri & Scruggs, 2000; Pugach & Johnson, 1995; Walther-Thomas, et al., 2000;)
7. Understandings of cultural diversity	(Harris, 1995; 1998; Salend, et al., 1997a; 1997b, Vaughn, et al., 2000)
8. Support of larger educational community	(Salend, et al., 1997a; 1997b)
9. Participants share common goals	(Friend & Cook, 2000)
10. Collaboration is voluntary	(Friend & Cook, 2000)

In summary, best practices for collaboration in special education can be drawn from the features of collaboration described in many formats (i.e., policy and position papers, qualitative research studies, professional literature). Table 1 combines applicable best practices for professional collaboration endeavors that would benefit all learners in special education contexts, including those who represent groups with cultural and/or linguistic diversity. The identification for best practices for collaboration in special education, provides the professional educational community common terminology with which to recognize and discuss collaboration efforts in educational settings.

Sustainability in Special Education

Sustainability is a concept that has been discussed in a more systematic way in fields of discipline such as medicine, environmental science, and ecological systems management (Rees, 1998). The most popular definition of sustainability can be traced to a 1987 United Nations conference. It defined sustainable developments as those that "meet present needs without compromising the ability of future generations to meet their needs"(WECD, 1987). Others in the many disciplines that consider sustainability have adopted the notion that sustainability refers to a very old and simple concept, 'do onto future generations as you would have them do onto you.'

These definitions set an ideal premise, but do not clarify specific human parameters for modeling and measuring sustainable developments. The following definitions are more specific: (a) sustainability means using methods and systems that won't deplete resources or harm natural cycles (Rosenbaum, 1993), (b) sustainability identifies a concept and attitude in development that looks at natural resources as integral

aspects of the development (Vieira, 1993), and (c) sustainability integrates natural systems with human patterns and celebrates continuity, uniqueness, and adaptability (Early, 1993).

Ecoscientists advocate the following general definition of sustainability for the specific purpose of ecosystem management (Norton, 1992; Kay, 1993):

Sustainability is a relationship between dynamic cultural, economic, and biophysical systems associated across the landscape such that the quality of life for humans continues both for individuals and cultures. It is a relationship in which the effects of human activities do not threaten the integrity of the self-organizing systems that provide the context for these activities.

In social terminology, a sustainable social system is one in which all members are empowered to contribute, creating a synergistic whole. In adapting this more general definition to sustainability in special education, this study is one that considers the relationship between dynamic cultural and educational systems associated across bilingual general and special education classrooms such that the quality of teaching and learning for teachers and students continues for all participants. It is a relationship in which the effects of professional collaboration activities between bilingual general and special educators, university interns, and university collaborators do not threaten the integrity of the educational programs that provide the context for professional collaboration activities. For the purposes of this study, sustainability is the maintenance of 'professional collaboration,' making use of available human and material resources,

without damaging the 'bilingual general and special education' programs for the time being observed or in the future (Rees, 1998).

Sustainability in general and special education research is the implementation of routines that have been shown to lead to more effective outcomes for the population being served over a period of several years (Gersten, Chard, & Baker, 2000; Gersten & Vaughn, 1997; McLaughlin, 1991; Vaughn, Klinger, & Hughes, 2000). The features of sustainability and best practices for sustainability in exceptional education have been best described by the research synthesis and studies of Vaughn et al. (2000); Klinger et al. (1999); Gersten, et al. (2000); Gersten, et al. (1997); Gersten and Brengelman (1996); Gersten, Morvant, and Brengelman (1995); Gersten, Woodward, and Morvant (1992); and McLaughlin (1990; 1991). This literature provides a foundation for the understanding of sustainability as it relates to learners in special education.

Features of Sustainability in Special Education

Global perspectives of sustainability research consider systems such as nations, cities, and society as a whole. In this context sustainability occurs when there is a maintenance of ecological integrity or a stable environment and social equity or justice fulfilling human needs through cooperative social relationships in a community with commonly held values (Rees, 1998). Rees (1998) expresses that in order to develop sustainability in any system, profound changes in existing power relationships must ensue as well as a reordering of cultural values. The author states that sustainability in many systems is unlikely because under the above mentioned conditions, it would require massive institutional reform. Vaughn, et al. (2000) bring the notion of sustainability into

the educational arena by noting the need to consider factors such as the environment, pedagogy or teaching practice, and teacher-student relationships when investigating the sustainability of research-based practices. The importance of a particular environment, a common culture or purpose, the redistribution of power, and the importance of relationships; are central to the comments of all authors, as well as the multifaceted complexities of sustainability.

Educational change it seems is related to and may be necessary for the sustainability of research-based practices. In his study of educational change, Senge (1990) concludes that people change what they need to change, not what other individuals think they need to change. This statement can be interpreted as: teachers change what they need to change, not what educational research says they need to change. This sentiment can be linked directly to the rarity of research-based practices found inside of classrooms (Fullan, 1991) and may explain why the historical record of the impact of educational research on practice is so bleak. According to this record, the relationship between education-related research and improving school practice is ambiguous and hard to discern (Reese, 1999). When research does find its way into classrooms the implementation is poor (Cuban 1996; Ellmore & McLaughlin, 1988; Kennedy, 1991) and the innovations are not sustained over time (Fuchs & Fuchs, 1998; Mastroprieri & Scruggs, 2000). Furthermore, if the scope and sequence of the innovation is too broad or abstract, implementation is not as successful (Berman & McLaughlin, 1976; 1978). These findings could be related to the degree to which teachers vary in their implementation of research-based practices (Englert & Tarrant, 1995; Gersten, et al.,

1995; Jenkins & Leicester, 1992; Vaughn, et al., 1998) or as a result of the individual manner in which each teacher is challenged to depart from their "old" way of thinking in order to embrace new teaching strategies, procedures, and programs.

Irregardless, central to understanding sustainability of research-based practices is awareness of the complexities involved. Determining the conditions under which sustainability occurs, which includes learning from learning communities that demonstrate sustainability of research-based practices what motivates them to do so, will inform the field of educational research in regard to linking research to practice (Vaughn, et al., 2000).

In understanding the sustainability of research-based practices in special education or general education, factors that support sustained research-based practices have been developed based on a review of the research in this area (Gersten, et al., 2000; Gersten & Vaughn,1997). The factors include: (a) the reality principle, (b) the scope of intervention, (c) linking changes in teaching to student learning, (d) collegial support, (e) conceptual linking of classroom situations that include joint problem solving by teachers and researchers, and finally (f) technical opportunities to practice and/ or experiment with ongoing support and feedback. The factors have recently been expanded (Gersten, et al., 2000) and include questions in response to sustainability related issues such as "deliberate plans to promote the sustained use" of a research-based practice, whether teachers are "provided with opportunities to understand or think through an instructional approach", and "explicit links to student performance data" (p. 457) .

The reality principle developed by Gersten in the mid 90's was preceded by concerns from professional development educational researchers addressing school improvement (Crandall, 1981; Huberman & Miles, 1984; Loucks & Zacchei, 1983). These scholars found that historically successful change efforts involved concrete usable remedies for classroom problems. In regard to children with special needs who are included into general education classrooms, Schumm and Vaughn (1991) found that teachers needed strategies that were feasible, in other words realistic to implement. Researchers were in search of practical applications as opposed to theoretical ideology. Gersten (1992) continued to push for more practical research findings by asking educational researchers whether their findings could be translated into manageable comprehensible teaching strategies and procedures in his quest to refine the working knowledge of experienced teachers. Soon thereafter the reality principle emerged. Gersten & Brengelman (1996) describe the principle as opportunities for teachers to discuss specific realities of applying new strategies with their colleagues, learning about the underlying concepts and intent of the innovation in a collaborative atmosphere.

In their quest to translate research into classroom practice Gersten and Brengelman (1996) found that when research-based practices were not sustained, it was in part due to scope that was either too broad and ambiguous or too narrow and limiting. Finding strategies that strike a balance and have the ability to provide positive outcomes for all involved over a period of time has shown to be challenging. One factor that supports sustainability of practice and that is evidence of changing student outcomes.

When changes in teaching lead to student learning, sustained practices are more likely. In staff development research efforts as early as 1976, educational investigators found that teachers continued innovative practices that enhanced performance for students who were difficult to teach (Bremen & McLaughlin, 1976). Gersten and his colleagues (1982;1986) found these same phenomena in two studies of inner city schools. This improvement of student performance was a critical determinant of sustained practices in two additional studies (Guskey, 1984; Sparks, 1988).

For research based-practices to be sustained in classrooms, they need be realistic, they need to demonstrate fit within the realm of the teachers' scope, and they need to result in improved academic performance for students. Linking the conditions and considerations for the study of sustainability (Rees, 1998; Vaughn, et al., 2000), these aspects of the foundation for sustained research-based practices address the teaching and learning environment and a common culture, purpose, or expectation. The importance of relationships and redistribution of power have yet to be addressed in the list of factors, although the collaborative discussions mentioned by Gersten and Brengelman (1996) suggest these ideals. Supporting these ideals, Gersten, et al (2000) later suggest teachers sustained innovative practices when they felt they had "membership" in a professional community, where the "professional development" was less structured and informal (p 452).

A form of collegial support can be found in the structures that facilitate and support the kinds of discussions mentioned above. In their most recent work, Cochran-Smith & Lytle (1999) explore an idea called "knowledge-in-practice" that investigates

teacher learning communities where teachers learn by probing the knowledge embedded in their practice and reflections on their practice in supportive groups of colleagues and researchers. These supportive groups can be viewed as the types of systems or structures that Guskey (1995) describes as being able to operate and sustain themselves providing technical, personal, and collegial support for teachers. As early as 1992, Gersten discovered the need for systems and structures that support research based practices by providing feedback from more proficient peers (Gersten et al., 1992) and supported by Cruickshank (1985) in his description of the use and benefits of reflective teaching.

In a synthesis of research on staff development, Showers, Joyce, and Bennet (1987) conclude that it is critical that teachers have generalopportunities to discuss new practices in a collaborative atmosphere. Regarding practice and research in special education in particular, Malouf and Schiller (1995) conclude that when teachers have opportunities for discussions, problem solving, and developing alternative strategies; they are able to merge practical knowledge with procedural knowledge. Research based professional communities that are cohesive and highly collegial report high levels of energy, enthusiasm, and support for personal growth and learning (McLaughlin, 1990; 1991). Models for successful dialogue sessions have been developed by educational researchers known for their work on collaboration in special and general education contexts (Friend & Cook, 2000; Johnson & Pugach, 1991; Pugach & Johnson, 1995; Richardson, 1990; Sparks-Langer & Colton, 1991).

Best Practices for Sustainability in Special Education

Collegial environments such as the ones described above lead to conceptual networks that lead to joint problem solving by teachers and researchers. In some cases, teachers become researchers which can cause the redistribution, of what can be perceived as power, and according to research in the area, leads to higher levels of sustainability (Rees, 1998). In the late 80's Schon (1987), in following some of Dewey's earlier ideas of the apprenticeship notion of teacher training developed the concept of the professional practicum. The professional practicum in essence was a sheltered learning space that approximated the real world, where novice teachers could learn from the expertise of a seasoned practitioner (Schon, 1987). The idea was such that this ongoing support in an artificial setting would promote the sustainability of the new practices in an actual setting.

The University of Kansas provides a example of authentic sustained collaboration in an actual setting. Scanlon, Schumaker, and Deschler (1994) report findings of high productivity and sustained research based practices that use collaborative dialogues between teachers and researchers to create educational interventions. Inspired by their own experiences and such work as that of the University of Kansas, Vaughn, Klinger, and Hughes (2000) call for a "new breed of teachers and researchers" who partner in research and development altering content and procedure for sustained interventions.

Opportunities for technical practice of innovative practices with feedback seem to further enhance teacher-researcher partnerships. Feedback needs to be specific and focused on the actor within the context (Eisner, 1992). From their collaborative work in

inclusionary classrooms, Vaughn and Schumm (1995) learned that involving stakeholders to guide and provide feedback for research studies is a timely endeavor, and that it is well worth the effort in relation to the outcomes.

When maintenance of the integrity of the environment is stable, expectations are communicated and well known by all, and there is a sense of equity or power diffused via shared responsibility and sound relationships; Cochran-Smith, and Lytle (1999) maintain teachers engage in knowledge-for- practice. Research-based practices are sustained in this environment because the knowledge that they need to teach well is generated when teachers treat their classrooms as sites for intentional investigation inspired by the knowledge and theory introduced by researchers. The resulting relationships give rise to heightened awareness, goal refinement, and joint research design (Scanlon, et al., 1994).

The literature on sustainability of research-based practice stems from research methodology that captures the spirit of collaboration. The system or structure needed as a vehicle for collaborative teacher discussion as described by Gersten and Brengelman (1992), Guskey (1995), and Cruickshank (1995) can be found in the focus groups used regularly in educational research by Vaughn, et al. (2000). Focus groups facilitated by researchers are used to learn more about what teachers perceive to be critical issues related to interventions (Vaughn, et al., 2000). Research findings that include the voices of practitioners have stemmed from sustained conversations provided by focus groups and insight into deeper more authentic teacher reflection can be captured. When focus groups have been used as a means of data collection, they have simultaneously provided support for teachers involved. In one study, these groups led to high levels of

implementation in 6 of 7 teachers after three years (Vaughn, et al., 1998). In another study without a focus group component, implementation was low after only one year (Gersten & Brengelman, 1996). The built-in support provided by focus groups is an important factor in sustainability of research-based practices. Literature on the topic of sound methodology for determining sustainability of practice state additional methods complement focus group interviews as: observations, checklists, and follow-up interviews (Vaughn, et al., 1998). From focus groups conducted by Gersten et al. (2000) findings in regard to the implications of sustainability for practice are as follows:

1. Teachers are eager to learn about and implement practices that are feasible and sustainable;
2. Teachers are starving for interventions that are documented as well as effective for all students (special and general education);
3. Teachers and parents crave instruction that yields documented outcomes for students in a context that supports learning and social growth (p.453).

In describing features that promote the sustainability of research-based practices in special education, activities that support and involve collaboration are among the most prominent (Gersten, et al., 2000; Gersten & Vaughn, 1997). Having reviewed features and best practices for collaboration and sustainability in special education, the review of literature for the applications of a theoretical base that is appropriate for diverse learners with special needs is necessary. Table 2 summarizes the features for best practices for sustainability in special education drawn from the sustainability in special education literature.

Table 2

Features and Best Practices for Sustainability in Special Education (Gersten et al., 1997)

Sustainability Features and Best Practices
1. The reality principle
2. Scope neither too broad nor too narrow
3. Linking changes to student learning
4. Built-in collegial support networks
5. Collaborative endeavors, joint problem solving
6. Opportunities for practice with feedback

Sociocultural Theory

In Russia during the nineteen-twenties and thirties, L. S. Vygotsky and his collaborators first conceptualized sociocultural approaches to learning and development. These approaches are based on the concept that human activities take place during culturally relevant activities, are mediated by language and other symbol systems, and can be best understood when investigated within their historical contexts (Vygotsky, 1987).

"The sociocultural approach is among the most substantial contemporary themes in a wide range of intellectual disciplines worldwide, including philosophy, literary aesthetic criticism, theology, and the social sciences" (Tharp, 1997, p.11). Sociocultural approaches emphasize the interdependence of social and individual processes in the co-construction of knowledge and as such, are a basic component of qualitative

developmental and educational inquiry. There are multiple interpretations and applications of sociocultural approaches, which reflect the dynamic nature of this perspective. Some common assumptions of the sociocultural community have been refined and clarified by contemporary scholars based on Vygotsky's original writings. According to Herrenkohl & Wertsch (1996), for example, sociocultural theory assumes that people operate within multiple contexts of interrelated events (e.g. family, the workplace, school settings), which deem learning and development activities that are socially and culturally mediated. Learning comes from interactions between parents and children, experts and novices, and teachers and students. Therefore, as maintained by Barbara Rogoff (1994), "learning is a process of transforming participation in shared sociocultural endeavors" (p. 210).

By the use of the same common assumptions, sociocultural theory explains the cognitive development of all individuals regardless of age, gender, culture, etc... (Tharp, 1997). Because of the universal applications provided by common assumptions, sociocultural theory can be employed in studies featuring children or adults, in a variety of educational contexts.

Sociocultural paradigms and approaches are relatively new to special education research (Artiles, Trent, Hoffman-Kipp, & Lopez-Torres, 2000). Although sociocultural theory has been found to complement and expand what is known about and learners in special education contexts (Artiles, et al., 2000; Artiles & McClafferty, 1998; Artiles & Trent, 1997; Baca & Cervantes, 1998; Bos & Fletcher, 1997; Echevarria & McDonough, 1993; Harry & Rueda, 1999; Johnson Santamaría, Fletcher, & Bos, in press; Keogh,

Gallimore, & Weisner, 1997; Ruiz & Rueda, 1995; Rueda et al., 2000; Salend, et al., 1997b; Webb-Johnson & Artiles, 1998), few special education studies employing the theory involve teachers (Artiles, et al., 2000; Artiles & McClafferty, 1998; Salend, Dorney, & Mazo, 1997; Obiakor & Utely, 1997).

An important common assumption and feature of sociocultural theory is the provision of responsible assistance by more proficient members of an activity setting to less proficient members (Tharp & Gallimore, 1988). This assistance which Vygotsky (1978) called "scaffolding," takes place in the less proficient persons' zone of proximal development (ZPD). To assist a less proficient learner in their ZPD, is for a more capable person to be responsive to the less proficient persons' current goals and stages of development and to provide guidance enabling them to achieve those goals, while increasing future participation (Wells, 1998). Less proficient individuals operate within their ZPD when they are involved in activity settings that require them to make challenging stretches in their development (Johnson Santamaría, Fletcher, & Bos, in press).

In regard to collaborative teaching situations, by their participation with more capable peers, less experienced teachers have increased opportunities to develop their teaching repertoires (Lave, 1996) and by involving themselves in the mediated activity of teaching, can adjust to social circumstances co-constructing shared understandings of one another (Rogoff, 1994). From a sociocultural perspective then, development is the process by which people participate to incorporate others' perspectives jointly accomplishing goals (Rogoff, Radziszewska, & Masiello, 1995). Exploring sociocultural

approaches in collaboration research and studies featuring the zone of proximal development will inform current and future research in the area. This will be followed by a summary that draws the literature sets on collaboration, sustainability, and sociocultural theory together, to support a rationale for the present study.

Collaboration in Sociocultural Research

The last decade has produced heightened interest in sociocultural theory. This interest resulted in numerous studies on such topics as the zone of proximal development (ZPD)(Brown, 1992; 1993; Johnson Santamaria, Fletcher, & Bos, in press; Palincsar, Brown & Campione, 1993; Tharp & Gallimore, 1988), collaboration (Cole, 1996; Forman & McPhail, 1993; John-Steiner & Mahn, 1996; Moll & Whitmore, 1993) and theory driven professional development (Artiles, et al., 2000). More recently, content areas such as Science and Math have been considered, employing sociocultural perspectives with special attention to the learners' ZPD (Steele & Reynolds, 1999; Westby & Torres-Velasquez, 2000).

Reading and writing in Spanish and English were integrated in the project-oriented literacy activities studied in Moll and Whitmore's (1993) investigation featuring collaboration in a bilingual classroom in the Southwestern United States. A sociocultural approach was used in this study, which examined the interactive and contextual aspects of cognitive change as students created and participated in communities of learners. Students were involved in highly contextualized learning activities. The teachers in the study provided guidance that was deliberately "mediated, almost hidden, embedded in the activities" (p. 38). They participated in thematic research activities; evaluated students'

development; and facilitated and planned activities (p. 38). This collaboration exemplified the family pattern later identified by John-Steiner & Mahn (1996), while the environment allowed researchers to isolate "activity settings" (Rueda, et al., 2000) where zones of proximal development could be studied.

In their case study of two students, Forman and McPhail (1993) highlight three features of a sociocultural perspective. First, they identify individual motivation in sociocultural practices where students have opportunities "to observe and participate in essential economic, religious, legal, political, instructional, or recreational activities, internalizing or appropriating their affective, social, and intellectual significance" (p. 218). Secondly, they found that a Vygotskian perspective implies that the outcomes of peer collaboration must be evaluated in context and over time (p. 218). Finally the authors examine discourse patterns within cultural historical settings (Forman & McPhail, 1993).

Forman and McPhail (1993) examine ways in which learners assist each other. Their work illustrates the complementary pattern of collaboration especially as it relates to problem solving. This study highlights the need to develop joint perspectives over time to achieve shared goals by way of mutuality and the use of specific forms of discourse "to engage in logical arguments, to share ideas, and to work together in the pursuit of common goals" (p. 226). This finding is comparable with the later finding of John-Steiner and Mann (1996), in identifying the importance of trust in the development of working methods in sustained collaboration.

In 1996, V.P. John-Steiner and H. Mahn explored current applications of sociocultural theory. Their focus was on co-participation, cooperative learning, and joint discovery in regard to teachers bringing existing knowledge to students by co-constructing it with them. These applications made clear the need to examine patterns of interaction and collaboration in these types of classrooms. A major goal of their research was to produce a theoretical model of the collaboration process that would identify collaborator's values, roles, working methods, and conflict-resolution strategies (John-Steiner & Mahn, 1996). This qualitative study revealed four patterns, collaboration that was: (a) distributed, (b) complementary, (c) family-like, and (d) integrative. These collaboration group configurations were present in both small groups and larger complex collaborations. Another goal for these researchers, similar to that of Harris (1995), was to examine how conflict resolution transformed the character of the collaboration and determine whether this type of resolution continued (Forman & McPhail, 1993).

John-Steiner and Mahn (1996) found that clear divisions of labor and discipline-based approaches distinguished complementary collaborations, such as those found in the organization of teams in classrooms. On the contrary, family-like collaborations, centered on the provision of social services including education. These were characterized by the fluidity of roles and the integration of expertise within the collaboration (Moll & Whitmore, 1993).

Multidimensional social relationships and unique cultural values affected interdependence in the co-construction of knowledge in classes that were not traditional teacher-centered transmission educational model classrooms (Forman & McPhail, 1993;

Harris, 1995; Johnson et al., in press; Moll & Whitmore, 1993). Ways in which cultural and linguistic factors shaped learning and development and the impact that these factors had on pedagogical approaches provided a theoretical foundation for sociocultural research of collaboration in the classroom (John-Steiner & Mahn, 1996).

Michael Cole, (1996), and his colleagues at the University of California, San Diego (UCSD) provide another example of the family pattern of collaboration in an after-school program known as the "Fifth Dimension," bringing together children and adolescents, community institutions, undergraduate students, and researchers "within the framework of a shared and voluntarily accepted system of impersonal rules" (Nicolopoulou & Cole, 1993, p. 293). More recently these and other researchers (Yonezawa, Jones, & Mehan, 2000) at the Center for Research in Educational Equity, Assessment & Teaching Excellence (CREATE) at UCSD have collectively extended Vygotskian analyses of learning beyond the small group level to include an examination of different sites as institutional and cultural contexts for culturally relevant educational activities. Programs coming out of CREATE are based on the character of collaboration endeavors which include the fluidity of roles across ages and areas of expertise. These innovative, collaborative programs contrast with traditional models of education which isolate teachers in their classrooms and ultimately seek to increase the rate of college-eligible students among underrepresented populations while improving academic achievement in K-12 schools, including parent involvement and attention to school healthcare issues (Yonezawa, et al., 2000).

Most recently, Rueda et al. (2000) and Artiles et al. (2000) conceptualize collaboration using sociocultural approaches in special education research by discussing the least restrictive environment (LRE) and multicultural teacher education, respectfully. Rueda et al. (2000) draw on a sociocultural framework to propose an expanded view of LRE. They argue that the physical setting referred to by the LRE is not the most appropriate "unit of analysis" when considering the "placement" of learners with disabilities, rather that the placement or setting can be either facilitating or restrictive depending on the collaborative nature of the "activity settings" that compromise each context. Artiles et al. (2000) on the other hand were interested in creating a culture of collaborative learning for the participants in their study. In addition, they aimed to trace the evolution of the culture of learning in a pre-service course to address the lack of research on pre-service teachers' processes about the role of culture in children's learning.

Having employed a sociocultural framework, the findings of Rueda et al. (2000) indicate that researchers and practitioners trying to understand LRE need to first understand activity within the "activity setting." They also maintain that the LRE should be viewed as an interaction between an individual and a setting, or collaboration between the two, rather than a physical place (Rueda, et al., 2000). From their preliminary analysis, Artiles et al. (2000) found that pre-service teachers who consciously took the political dimensions in educational and learning processes into consideration, were apt to use sociological and cultural-historical lenses to make sense of their formative experiences more so than their less conscious peers.

Steele and Reynolds (1999) in their study of a Mathematics classroom examine a classroom vignette illustrating the ways in which students acquire mathematical language. Their study provides a demonstration of how Vygotsky's (1994) ideas can be put into action in a mathematics classroom and emphasizes the importance of social interaction and communications in learning mathematics as important aspects of good mathematics teaching. More specifically these researchers considered ways in which language and meaning develop together when new vocabulary is presented in a meaningful context. They identify this context as the child's ZPD. This context is important because children acquire vocabulary based on the context in which it appears (Steele & Reynolds, 1999). From this study of a Mathematics classroom the researchers found that individuals come to learn the meanings of technical terms by transforming them and being transformed by them in the process of internalization (Vygotsky, 1994). Steele & Reynolds (1999) report, "The students in this fourth-grade class have constructed a powerful way of thinking about mathematics through social interactions with a more knowledgeable person, their teacher" (p. 42).

Similarly, Westby & Torres-Velasquez (2000) use a sociocultural framework in their study, which describes scientific literacy and the importance of mediated activities for scientific learning. They examine the difference between empirical and theoretical learning as an important aspect for teachers to understand as they work with students learning scientific concepts. In addition the authors discuss components of scientific literacy and provide recommendations for teaching in the zone of proximal development. Their recommendations include, building instruction on students' ideas, encouraging

learners to talk about their learning, and negotiating, sharing, and thinking in meaningful mathematical language modeled by the teacher. Finally, a conceptual model adapted from "ethnomathematics" is introduced to demonstrate the effect of theoretical learning on cultural change, using an intergenerational study from Chiapas, Mexico, as an example. From their study, Westby & Torres-Velasquez (2000) found that "educators must prepare students for a world that the educators themselves have not yet experienced and that through mediated experiences, teachers can provide students with the psychological tools (e.g., language, mnemonic techniques, symbols) that will enable them to extend their theoretical learning independently" (p. 111). Tools acquired within the learners' zone of proximal development (ZPD).

Features of the Zone of Proximal Development (ZPD)

The last two studies reviewed featured the zone of proximal development as it relates to classroom learning. They used this theoretical and methodological approach to study and describe the concept of internalization as it relates to the ZPD, analyzing internalization and individual and social processes as interrelated parts of neurophysiological, psychological, educational, political, and cultural systems (Tobach, 1995).

Moll (1990) cautions educators who readily 'adopt' the ZPD as a "clever instructional heuristic" (p.4), claiming that it is a "key theoretical construct, capturing ... the individual within the concrete social situation of learning and development" (p.4). The concept of the ZPD attempts to create a construct, which makes hidden social

processes visible. Educational settings provide access to learning as a social process for scientific inquiry involving the ZPD (Moll, et al., 1992; Cole, 1996; Rogoff, 1994).

According to Vygotsky (1978) human development is primarily social beginning with dependence on caregivers. As individuals develop, they rely on the conveyed experiences of others. The theorist maintains, "every function in the cultural development of the child comes on the stage twice, in two respects: first in the social, later in the psychological, first in relations between people as an interpsychological category, afterwards within the child as an intrapsychological category.... all higher psychological functions are internalized relationships of the social kind, and constitute the social structure of personality" (in Valsiner, 1987, p. 67).

When beginning an activity, learners depend on others with more experience. Eventually individuals assume responsibility for their own learning and participation in joint activity (Lave & Wenger, 1991). Rogoff (1990) calls this process guided participation. In her cross-cultural studies, she documents children's participation with parents and peers. Rogoff (1991) found that even when children were not speaking directly with adults, they were nonverbal participants involved in the adult world. In this study she describes the interactive engagement of Mayan mothers with their children as an example of the kind of nonverbal guidance adults give children (Rogoff, 1991).

According to Rogoff (1991), routine interactions between children and their caregivers provide children with multiple opportunities to observe and participate in culturally relevant activities. "Through repeated and varied experience in supported routine and challenging situations, children become skilled practitioners in the specific

cognitive activities of their communities" (Rogoff, 1991, p. 351). By internalizing these interactions, children acquire useful strategies and crucial knowledge for survival. From this perspective, learning and development take place in socially and culturally shaped contexts.

One focus of sociocultural research is the study of the way that the co-construction of knowledge is internalized, appropriated, transmitted, or transformed in formal and informal learning settings employing various scaffolds and a learner's zone of proximal development (ZPD). Different types of internalization reflect different teaching and expert/novice interactions. To describe these interactions, a continuum with direct instruction on one end and collaborative learning on the other could be used.
The acquisition of knowledge within one's ZPD is a fundamental part of the co-construction of knowledge and learning in both children and adults.

As defined by Vygotsky (1978), the ZPD is "...the distance between the actual developmental level as determined through independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). Sociocultural theorists, who have further developed this notion, conceptualize learning within the ZPD as distributed (Cole & Engeström, 1993), interactive (Chang-Wells & Wells, 1993), contextual (John-Steiner, Panofsky, & Smith, 1994), and the result of the learners' participation in a community of practice (Rogoff, 1994). Gallimore and Tharp (1990) maintain that the most productive social contexts for teaching and learning consist of productive interactions, which occur in goal-directed activity settings, "which are jointly undertaken by apprentices and

experts. They involve contributions and discoveries by learners, as well as the assistance of an "expert" collaborator (p. 200).

In the early nineties, Ann Brown (1992; 1993) developed and implemented educational programs based on the ZPD. She and her colleagues suggested that active agents within the zone of proximal development "can include people, adults and children, with various degrees of expertise, but can also include artifacts, such as books, videos, wall displays, scientific equipment and a computer environment intended to support intentional learning" (1993, p. 191). One of the important features of these studies is the way "divergent classrooms can become learning communities -- communities in which each participant makes substantial contributions to the emergent understandings of all members, despite having unequal knowledge concerning the topic under study" (Palincsar, Brown, & Campione, 1993, p. 43). The researchers explore the role of "reciprocal teaching," an approach in which "students and teachers take turns leading discussions about shared text" (p. 43), to determine how structured dialogues may foster learning communities. Teachers in these studies have changing roles. They share with the students, tasks of questioning, clarifying, and summarizing.

More recently in their study of scaffolded language arts instruction for English language learners (ELLs), Johnson Santamaria, et al. (in press), further expand active agents within the ZPD to include intraindividual phenomena such as prior knowledge in a first language. They maintain that Krashen's (1994) comprehensible input, which includes a theory known as i +1, or input plus more than the learner is capable of, is comparable to the ZPD. Throughout this process additional scaffolds were used by

students including each other, text-sets, story maps and frames, and teachers. The researchers conclude that the community of learners that resulted from an environment that made use of so many scaffolds, both external and internal, yielded positive results for ELLs.

These studies exemplify two major themes in sociocultural approaches to classroom learning and teaching: (a) the implementation of educational programs that allow for or encourage the co-construction of knowledge and (b) the analysis of this learning contributing to our understanding of classroom learning from a sociocultural perspective. Collaborative learning plays an increasing role in these as well as many other innovative classrooms.

In 1988, Tharp and Gallimore developed a four-stage model of the ZPD that delineates the process of an individual's movement through the zone of proximal development. This continuum ranges from having parent, expert, teacher, or more capable peer assistance; to assistance provided by self; to internalization, or what the authors deem fossilization; to deautomazation where a learner automatically goes back in a recursive loop to where learning occurs (Tharp & Gallimore, 1988).

From the research reviewed then, it can be determined that an individual is operating within their ZPD when learning is social and: (a) learners are dependent on others with more experience during routine interactions, which may be (b) collaboration with more capable peers, in (c) activities that are intended to support intentional learning, where there is (d) interactive engagement among participants and the (e) contextual co-construction of knowledge among participants resulting in (f) learners' reciprocal

participation in a community of practice and (g) the internalization of the co-constructed information/ knowledge resulting in (h) changed or improved practice. These features can be synthesized to create a rubric that can be useful in determining whether an individual in a learning situation is operating within their ZPD. Table 3 provides the literature-based foundation for such a rubric.

Table 3

Features of Operation within the ZPD Drawn from Sociocultural Literature

Features of Operation within the ZPD (Vygotsky, 1978)
1. Learners are dependent on others with more experience during routine interactions (Lave & Wenger, 1991; Rogoff, 1991)
2. Collaboration with more capable peers (Tharp & Gallimore, 1988)
3. Activities that are intended to support intentional learning (Johnson Santamaría, et al., in press; Palincsar, et al., 1993)
4. Interactive engagement among participants (Chang-Wells & Wells, 1993; Moll, L. C., Amanti, C., Neff D., & Gonzalez, N., 1992)
5. Contextual co-construction of knowledge among participants (John-Steiner, et al., 1994; Moll, et al, 1992)
6. Learners' reciprocal participation in a community of practice (Cole & Engeström, 1993; Moll, et al, 1992)
7. Internalization of the co-constructed information/ knowledge (Johnson Santamaría, et al., in press; Rogoff, 1994)
8. Changed or improved practice (Brown, 1992; Moll, et al, 1992)

Summary of Collaboration, Sustainability, and Sociocultural Theory Literature

As maintained by Friend and Cook (2000), professional collaboration is a teaching style or set of voluntary actions practiced by educators engaged in joint problem solving as they work toward the same goals. Sustainability has been described as the

maintenance of a particular 'way of doing things' (e.g., mode, style, method) making use of available resources (Rees, 1998). Sociocultural theory, or activity theory as it is sometimes called, provides a lense through which to study the continuation of the social activity involved in professional collaboration over time. Because of the social interactions inherent to collaboration and sustainability, the sociocultural literature reviewed was complimentary and linked both areas. The collaborative nature of novice-expert interactions in Vygotsky's ZPD (1978) are especially relevant to a study of the sustainability of collaboration. Furthermore, Tudge (1990) maintains that 'collaboration with another person...in the zone of proximal development leads to development in culturally appropriate ways" (p. 157), which is another way of saying that collaboration within the ZPD leads to sustainability.

The identification of features for collaboration and sustainability in special education as well as the features of the zone of proximal development (Vygotsky, 1978) can provide researchers with a common language to study, compare, and contrast these features among one another. The present study considers the development, implementation and later sustainability of professional collaboration for diverse learners with special needs and is grounded in the literature reviewed.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

In Chapter Three, the design, methods, and procedures used in the present study are described. The chapter is organized into several sections: (a) research design and questions; (b) setting and participants; (c) data sources; (d) intervention; (e) data collection; and (f) data analysis.

Case Study Research Design and Research Questions

The research design for this qualitative investigation is firmly grounded in the wealth of information gleaned from existing special education case studies (Phillips, Fuchs, Fuchs, & Hamlett, 1996; Klinger, et al., 1999; Trent, 1997; Vaughn, Schumm, Jallard, Slusher, & Samuell, 1996) and others who have written extensively on qualitative or case study methodology (Bogdan & Biklen, 1992; Bos & Richardson, 1994; Coffey & Atkinson,1996; Merriam, 1998; Rossman & Rallis, 1998; Seidman,1998). In this section qualitative research as a whole is considered, followed by a description of case study research, a particular type of qualitative research.

Tesch defines qualitative research as "...all research not concerned with variables and their measurements" (p.46, 1990). One major characteristic of qualitative research design is that it allows the study of the meaning of how people describe events and life experiences. In other words, qualitative research provides "an understanding of the qualities of phenomenon within their particular contexts" (Bos & Richardson, p.179). In qualitative modes of inquiry reality is socially constructed, variables are complex, interwoven, and difficult to measure, they are conducted from an insider's point of

reference that understands the participants' perspectives. They can end with hypotheses or grounded theories, use the researcher as an instrument, and search for patterns inductively (Glaser & Strauss, 1967). These modes of inquiry seek pluralism and complexity making minor use of quantitative sources in their descriptive write-ups, and finally assume personal involvement, partiality, and empathetic understanding on behalf of the researcher (Bogdan & Biklen, 1992). Merriam (1998) goes on to describe characteristics of qualitative research as having an objective tied to the elicitation of comprehending a case or phenomena, where the researcher is primarily responsible for data collection and analysis via fieldwork yielding highly descriptive findings. Some types of qualitative research are: ethnographies, phenomenologies, and grounded theory studies.

Qualitative research as defined by Merriam (1998) is an "intensive holistic description and analysis of a single unit or bounded system" (p.12). Case study design, though, is more intimate than other types of qualitative research designs in that it provides a deep understanding of the situation through the meaning it conveys to the participants involved. Case studies have been used successfully in the past in research studies that employ sociocultural perspectives and work that considers participants who are culturally and linguistically diverse (CLD). This study takes both a sociocultural perspective and includes participants who are CLD. The single unit or bounded system in this study is the K-1 bilingual special education classroom where a system of professional collaboration was introduced and sustained for a period of more than three years.

This two phase case study or in-depth look at the bilingual special education classroom, is in response to the various calls to research for socioculturally oriented researchers to look more closely at the ways in which collaborative endeavors develop, are introduced, and maintain themselves, from the perspectives of those directly involved (Salend, et al., 1997a; 1997b). Case study methodology with its intense attention to descriptive detail via the analysis of interviews and observations provides a manageable framework in which to conduct this study.

A design matrix that includes the two phases, three research questions, data sources, and data analyses procedures; serves to provide a more precise framework encompassing the design and methodology for this study. The study was conducted in two phases: Phase I, the implementation of the intervention (January 1997-May 1997) and Phase II, the sustainability of the intervention (August 1997-October 2000). Phase I data sources include: focus group interviews, teacher journal entries, observations, and teacher lesson plans. Phase II data sources include: follow-up interviews, observations, and supporting documents (i.e., intern journal entries, analytic memos, district documents). The initial data set from Phase I was gathered for nine consecutive weeks. Ongoing data from Phase II was gathered two or three times every year. Data analysis was collaborative including the primary investigator, teachers in the study, interns, administrators, and university collaborators. The research questions used to guide and address the outcome goal of this inquiry were:

1. In relation to the research-based framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support (Phase I)?
2. In relation to the research-based framework for best practices and features of sustainability (Gersten, et al., 2000; Gersten & Vaughn, 1997), how was collaboration sustained after initial intensive supports were removed (Phase II)?
3. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) inform:
    (a) collaboration from the time of initial intensive support (Phase I) and
    (b) after initial intensive supports were removed (Phase II)?

See Table 4 for an illustration of the design matrix.

Table 4

Design Matrix for the Case Study

Phase	Research Question	Data Source	Data Analysis
Phase I: Implementation of Intervention (January 1997-May 1997)	1. In relation to the research-based framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support? 3a. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) inform collaboration from the time of initial intensive support ...?	• Focus group interviews • Teachers' journal entries • Observations • Teachers' lesson plans	1. Organize data 2. Become familiar w/data 3. Code data to answer questions 4. Identify key words 5. Identify emerging themes marked by key words 6. Compare major themes to features/factors found in literature 7. Report findings
Phase II: Sustainability of Intervention (August 1997-October 2000)	2. In relation to the research-based framework for best practices and features of sustainability (Gersten, et al., 2000; Gersten & Vaughn, 1997), how was collaboration sustained after initial intensive supports were removed? 3b. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) inform collaboration ... after initial intensive supports were removed?	• Follow-up interviews • Observations • Supporting Documents (i.e., intern journal entries, analytic memos, district documents)	1. Organize data 2. Become familiar w/data 3. Code data to answer questions 4. Identify key words 5. Identify emerging themes marked by key words 6. Compare major themes to features/factors found in literature 7. Report findings

Setting

The study was conducted at Los Alamitos Elementary School (a pseudonym) in a metropolitan school district of about 14,000 students located in the Southwest. From the initial intervention (1996-97) throughout the follow-up data collection (1997-98, 1999-

2000) there were approximately 700 students attending the school each school year (95% Latino, 2% Native American, and 3% from other ethnic groups). Over 95% of the students were on free or reduced lunch programs. The school neighborhood was considered to be transitional with new immigrants arriving regularly and moving to more established communities when financial opportunities improved. Academic achievement scores in this school were low (middle of the bottom quartile) compared to the district average (second quartile) and national reading averages. According to district policy, English language learners (ELLs) participated in a late transitional bilingual education model where students received Language Arts in their primary language for Kindergarten through third grade. The school district had no formal policy written on inclusion of children with disabilities. The ELLs with learning disabilities were provided special education services in resource consultative models or self-contained classrooms.

The study involved two bilingual first grade classrooms: one a general first grade classroom and one a special education classroom. Prior to the study, the bilingual special educator was responsible for seven students, inclusion them with their peers for art, music, and library time. Two full-time paraprofessionals were responsible for such tasks as running instructional centers or working one on one with students needing special assistance or academic support. The general education bilingual teacher was responsible for 24 students. There was one full-time paraprofessional assigned to her classroom with duties similar to that of the paraprofessionals in the special education classroom.

Although the children in the bilingual special education class had disabilities that ranged from mild mental retardation to autism, the teacher created an interactive environment with multiple learning opportunities for all of the participants in the classroom. There were learning opportunities between and among students with more capable learners 'assisting' less capable peers, opportunities for the teacher to participate in 'research' activities where she and the students learned new ideas together, and opportunities for assigned paraprofessionals to learn and 'practice' teaching strategies and techniques while working with students (Bos & Reyes, 1996). The bilingual general educator's classroom resembled that of the bilingual special educator in that she operated similarly by creating an 'interactive' environment as well.

In both classrooms, Children's work decorated the classroom walls and bulletin boards, including webs, charts, and poems. Conversations in both Spanish and English could be heard in the classroom and children were encouraged to work to their full potential.

Initial data were collected during the spring semester of the 1996-1997 school year (Phase I). When the initial study began, both teachers maintained their classroom climates complete with centers, reading areas, large areas for whole group activities, work tables for adult helpers, and places where children who needed individualized study time could work. Both classrooms also had areas where computers were set up for student use. The intervention resulted in a change in student assignment to classrooms. Throughout Phase I of the study, the special educator taught 16 students as opposed to 7 and the general educator taught 16 students as opposed to 24. At times, the teachers

adjusted student assignments based upon perceived student challenges and successes in either classroom, but the numbers remained consistent. Other support staff was also shared equally as a result of a near equal reallocation of resources.

The following school year (the beginning of Phase II of the study), the bilingual special and bilingual general educator team-taught in the bilingual special education classroom in a job-sharing arrangement. A new site administrator came bringing new expectations and the formal collaboration between a bilingual educator and a bilingual special educator ended. On-going research took place in the bilingual special education classroom.

Participants

Phase I

Original participants in this study included one bilingual special educator (who was also the participant researcher), one bilingual general educator, three special education support staff, four paraprofessionals, and 32 students (13 girls, 19 boys). Ninety nine percent of the students, the general educator and most of the support staff and paraprofessionals were Mexican or Mexican American. The bilingual special educator and one paraprofessional were of African American decent. Students in the classrooms varied in their levels of English language learning from ELLs with little knowledge of English to bilingual (Spanish and English). There was one student at the onset of the study who was monolingual English.

In the initial investigation year, the bilingual general educator was a first year teacher. According to the teacher, she was having a difficult time balancing her desires to implement fresh teaching ideas while being encouraged by her grade level team to

participate in the creation of academic centers for predetermined units for all the teachers on that team to share (journal entry January, 1997).

She was joined by one paraprofessional, a mother of two children who attended Los Alamitos. Her duties, similar to those of other paraprofessionals at the school, were to assist the teacher in preparation for academic activities and conduct small group instructional activities.

The bilingual special educator (participant researcher) was in her third year teaching but her first year in a bilingual special education position. She had participated in action research the previous year and brought strong beliefs about Features of good teaching with her. She felt capable and confident in applying theory in her classroom and was eager to share her knowledge with others. Evenings were spent at the university where she was in the process of completing her Master's degree in bilingual special education. She had collaborated with university professors in her department and looked forward to future opportunities to do so.

Two paraprofessionals were assigned to the bilingual special education classroom. One was an older woman who had worked at Los Alamitos School for over eight years. She was comfortable with her role as caretaker and provided much affective support for the classroom. The other paraprofessional was a young student working in the classroom to gain experience in working in school settings. She was hired to assist the teacher with some students who needed one-to-one assistance.

In addition to these key players in the collaboration effort, a bilingual speech therapist was involved as well as a bilingual resource teacher, a part-time

paraprofessional who worked with them, and an occupational therapist. University collaborators were involved during Phase I of the project and served to consult with the bilingual special educator who initiated the project and to conduct focus group interviews.

Phase II

During Phase II, or the sustainability of the intervention, the bilingual general educator and the bilingual special educator job-shared in the bilingual special education classroom for two years. University interns worked with the teachers, gaining necessary competencies for becoming bilingual special educators through the university's Master's degree program which one of the university collaborators coordinated.

Throughout Phase II the teachers' roles changed as a result of their increased participation in higher education. The bilingual general education teacher completed her Master's degree in bilingual special education. She later became an instructor at a community college training professionals in English as a Second Language (ESL). The bilingual special educator (participant researcher) was also supervisor of university interns in the bilingual special education program during Phase II. In addition, she worked for the university part-time and eventually went on to pursue a doctoral program in special education.

After both teachers who began the intervention went on to (in their words) "impact more children," a new bilingual special educator was hired. She had worked as a university intern in the job-shared classroom of the original teachers as she completed her Master's degree in bilingual special education. In fall 2000, the principal hired another

university intern who worked previously in the bilingual special education classroom. Her position is: bilingual special and general education inclusion specialist.

Over the course of three years, the original paraprofessionals relocated to other positions and were replaced by a mother who had four children attending the school, a mother who had two children attending the school, and one career paraprofessional in the district. In fall 2000, an additional paraprofessional was assigned to work with one student who has cerebral palsy.

The bilingual speech and resource professionals, who were participants during Phase I of the study, have been involved in the effort throughout Phase II. One university collaborator teaches and advises students who teach at the site in a limited capacity, while the other is in another state. Table 5 delineates participants over time in the project.

Table 5

Participants During Phase I and Phase II of the Intervention

	School Year				
	Phase I	Phase II			
Title	96-97	97-98	98-99	99-00	00-01
Bilingual Special Educator	X	X	X	*X	*X
Bilingual General Educator	X				
Bilingual Paraprofessional (s)	X	*X	*X	X	*X
General Paraprofessional	X				
Speech Therapist	X	X	X	X	X
Resource Teacher	X	X	X	X	X
Professor(s)	X				
Intern(s)		X	X	X	X
Inclusion Coordinator					*X

(*) Newly hired personnel.

Data Sources

There were two sets of data sources for this study: data from Phase I (the implementation of the intervention) and Phase II (the sustainability of the intervention). For Phase I the data set was collected from January through May of the 1996-1997 school year. Phase I data included: (a) focus group interviews, (b) teacher journal entries, (c) observations of videotapes of focus group interviews, and (d) teacher lesson plans. Phase II data sources were collected from August 1997 through October of the 2000-2001 school year. They included: (a) follow-up interviews, (b) classroom observations, and (c) supporting documents (i.e., intern journal entries, analytic memos, district documents). Analysis was ongoing throughout Phases I and II of the study.

Phase I: Data from the Implementation of the Study

Focus group interviews. Five ninety-minute focus groups with 2 and 7 individuals were used as a data collection tool for this study as an authentic means for soliciting teachers' views during sustained conversations among participants (Klinger, et al., 1999; Vaughn, et al., 1996). As modeled by Klinger et al. (1999), an altered version of the traditional focus group format was used. This format reduced the role of the moderator to that of a facilitator, increased participant interaction, and increased time to allow for complete participant responses. According to Greenbaum (1998), "when used appropriately, focus groups can be extremely effective in generating meaningful information...toward a variety of different topics" (p. 15). In addition to providing basic information, they served to foster reflection, function as vehicles for change and problem solving, and to foster a sense of collaboration (Vaughn et al., 1996).

Focus group interviews in Phase I were structured by informal guiding questions. Focus groups were conducted after school in the special educator's classroom. Participants generally included teachers, support staff, paraprofessionals, and an occasional administrator. University collaborators in the project facilitated, audio, and videotaped the interviews. As a result, the sessions were more comfortable and less formal than one on one interviews. Key to the effectiveness of the focus group interviews in this investigation, were teachers' opportunities to listen to one another speak on a common subject or theme while forming and then expressing their own ideas.

While some of the questions of the focus groups interviews were consistent across the study, others varied based on where the group was developmentally in terms of collaboration, inclusion, and problem solving. Although focus group membership varied based on the after school availability of team members, the participant researcher, bilingual general educator, and bilingual speech therapist were at all of the interviews. Sample questions that were consistent across all focus group interviews to be considered for this study are (see Appendix A for a complete list of focus group interview questions):

- It will help us if you spend a few minutes telling us about Project LaCiip. Probe:
  - -What are the goals?
  - -What kinds of students does it serve?
  - -How have you grouped the children?
  - -How does it work?
  - -What are the key features?
  - -How does the curriculum work?
  - -How does the different staff function in the project?
- What do you see as some of the barriers or concerns for implementing this project?
- What do you think will be the key factors or strategies that will make this project work?

Each focus group interview was videotaped so that non-verbal communication including facial expressions, hand gestures, and visual interactions could be considered in interpreting transcribed interviews. The video camera was set on a tripod throughout each focus group interview session and was an unobtrusive means of data collection.

Teacher journal entries. Teacher journal entries came from the classroom teachers and specialists during the implementation phase of the intervention. Like focus group interviews, they provide an outlet for teachers to express their experiences in a safe environment, encouraging growth (Vaughn, et al., 1996). Teachers used them to document and reflect the experience of developing and implementing an intervention, as well as to communicate to one another daily.

Observations. Observational field notes, according to Merriam (1998), are the written manifestations of a researcher's perceptions of a time, place, and circumstance. She goes on to say that the more inclusive or complete the account, the easier it is to analyze. Observation field notes can be very complete or ambiguous, but either way it is "imperative that full notes be written, typed, or dictated as soon after the observation as possible" (p.104). Feelings, reactions, and other affective responses can add flavor and detail to otherwise descriptive observation field notes.

Observations from Phase I of the study were generated from "field-notes" taken by the participant researcher while viewing videos of the focus group interviews. These observations were then member checked by the bilingual general educator (Merriam, 1998). All five video observations from Phase I focus groups will be considered for this study.

Teacher lesson plans. As daily logs of hour-by-hour accounts of each school day, the lesson plans recorded educational activities planned for each day, meetings with collaborators, and other pertinent information. The lesson plans of the participant researcher, bilingual special educator, and specialists were considered for the study.

Phase II: Data Sources for the Sustainability of the Intervention

Follow-up interviews. Less structured follow-up interviews were conducted throughout the three-year sustainability phase as needed to "corroborate and/or clarify information gathered through other sources" (Klinger, et al., 1999, p. 269). These hour long reflective phenomenological interviews took place approximately once a year with either one of the classroom teachers, a special education support teacher, or one of the university interns. These interviews were based on the teachers' lived experiences, worldviews, and perceptions of student success as a result of the professional collaboration taking place in the classroom (Rossman & Rallis, 1998), and were a variation of Seidman's (1998) three iterative version interview. Rather than a retelling of one's life history for the first interview, participants gave reasons for having become involved in bilingual special education. The second interview was designed to elicit the participants' general thoughts on collaboration, and the final interview served to elicit their perceptions and understanding of collaboration as related to the classroom. The schedule for collecting data sources will be found in the section on data collection in Table 6. See Appendix B an excerpt from a follow–up interview.

Observations. For Phase II of this study, the participant researcher took the observational field notes regularly while supervising interns working in the bilingual

special education classroom as part of their university requirements. These observations were taken immediately as the interns participated in classroom teaching activities. One formal observation per intern was considered for Phase II of the present study.

Supporting documents. As a result of a longitudinal study, various supportive data sources assist in completing "the picture" over time, serve to further triangulate the data, and provide the researcher with additional confirmatory information (Coffey & Atkinson, 1996). Supporting document sources for this study include: (a) intern journal entries, (b) participant researcher analytic memos, and (c) district documents. Journal entries came from all of university interns who worked in the bilingual special education classroom with the participant researcher as their supervisor. Analytic memos are a little different in that as maintained by Rossman and Rallis (1998), they are "hunches and analytic ideas that run through the study shaping and refining the researcher's thinking, providing insight for analysis" (p. 177). District documents are miscellaneous documents that describe the intervention and sustainability of the collaboration studied. They may include letters, job descriptions, teacher reviews, or observations made by district representatives. The participant researcher developed an on-going collection of these memos, as she analyzed the data annually for different academic purposes.

Intervention

Phase I: Implementation of the Intervention

During Phase I, the initial intervention was developed and implemented into the bilingual and general education classrooms during the spring of 1996-97. Out of the need to mainstream her students in general education classrooms, the K-1 bilingual special

educator (participant researcher) devised a plan that would enable the children to learn alongside their peers immediately following the Winter break of the 1996-97 school year. This plan was designed not only to address the need for her students to be educated in the least restrictive environment, but it could also support and complement general educators, provide general educators with tools, strategies, and modifications for working with children with mild/moderate disabilities, fulfill a need to reduce negative stigma associated with special education by professional collaboration involving the university, fulfill the need to increase the knowledge of both special and general educators, and redistribute an inequitable allocation of resources.

Her plan involved collaboration with a bilingual general educator teaching in the same grade, several special educators, and the paraprofessional staff who worked with all of the teachers. She met with the general educator to discuss a possible partnership and was received favorably. She proceeded to share the plan, which had evolved into a proposal, with the remaining bilingual special education team, and again was met with favorable responses. Feeling as though this project could evolve into something substantial, the special educator took her idea to professors at the university where she was working on her Master's degree. She asked if they would be interested in becoming a part of the effort, perhaps by informally observing, providing support, or collaborating and assisting in data collection. They were enthusiastic and planned to participate pending a district approval of the effort. The special educator then drew up a formal project proposal, submitted it to the site administrator, district officials in both special and general education, her "team," and the university collaborators. See Appendix C for

a copy of the original proposal. All parties agreed and the Los Alamitos Collaborative Interdependent Instructional Project (LaCiip) was born.

The participants of LaCiip met along with two university professors to address the primary needs of students in the bilingual special education program who were not being effectively integrated into bilingual education classrooms and to reconsider how resources could be used effectively to promote integration and maximize student growth. First, students from the special and general education classrooms were regrouped so that students with special needs were integrated into both classrooms. As a result, teachers, specialists, and paraprofessionals were utilized so that students who required support received it regardless of whether they were in the bilingual special education classroom or the general bilingual education classroom. These discussions focused on issues of implementation and became a working time for the staff to problem solve. Teachers also kept reflective journals and teaching plans. Some of the features of LaCiip were: (a) joint planning, (b) formal and informal meetings, (c) evolving grouping practices for students, (d) site administrator support, (e) reallocation of resources, (f) role changes, (g) increased communication, (h) university collaboration, (i) additive and instrumental views of language and culture and (j) the support of a larger educational community. These features will be further expanded in Chapter 4.

Phase II: The Sustainability of the Intervention

The following year the bilingual and special educator began a job-sharing arrangement in the bilingual special education classroom in order to pursue degrees in higher education. The formal supports for LaCiip were no longer operating during this

period due to many factors. First, a new administrator did not encourage others to practice the model; secondly, there were no general education teachers who volunteered to participate; and finally, increased university obligations made it difficult for university collaborators to continue working alongside the teachers to the extent they had during Phase I of the project. Interestingly, the teachers continued with the collaborative behaviors they had learned, worked with university interns thereby maintaining links to higher education, while continuing their own educational pursuits at the university. See Table 5 (p. 80) for an account of role changes for participants throughout Phase II of the study. Roles for the original team members of LaCiip changed for all but two teachers: the bilingual speech therapist and the bilingual resource teacher.

Data Collection

Data were collected across the two phases of the study. Phase I signifies the implementation of the intervention where Phase II signifies the sustainability of the same intervention.

Phase I: Data Collection During The Implementation of the Intervention

Focus group interviews were conducted once a month for five months during the spring of 1997. They were held after school in the participant researcher's classroom and lasted 90 minutes each. These interviews, facilitated by university collaborators were both audio and video taped then transcribed for analysis. Teachers brought their journals and lesson plans to each focus group interview. University collaborators photocopied them. Observations during this time came from field notes generated while the participant researcher watched the videos of the focus group interviews.

Phase II: The Sustainability of the Intervention

Throughout Phase II of the study the participant researcher conducted five follow-up interviews. One during the Fall of 1998 with the bilingual speech therapist and the bilingual general educator, another in the Spring of 1999 with the bilingual general educator, one in the Fall of 1999 with the new bilingual special educator, and two in the Fall of 2000; with a former intern in the bilingual special education classroom. Classroom and intern observations occurred both formally and informally as part of university requirements by the participant researcher. These were recorded every semester from 1998 to Fall 2000, and range from university forms to sidebars in the researcher's notebook. One observation per year will be considered for this study.

In regard to supporting documents, intern journal entries recorded events from fall of 1998 to fall of 2000. Lesson plans were collected where teachers recorded classroom instruction, student activities, staff meetings, and overall planning from spring of 1997 to spring 1999. Analytic memos were recorded from the fall of 1998 through the fall of 2000. Table 6 presents an overview of the data collection.

Table 6

Data Collection Timeline

Data Source	SP97	F97	SP98	F98	SP99	F99	SP00	F00
Phase I: Implementation								
Focus Groups	X							
Journals	X							
Observations	X							
Lesson Plans	X							
Phase II: Sustainability								
Follow-up		X		X		X		X
Interviews								
Observations			X	X	X	X	X	X
Supporting		X	X	X	X	X	X	X
Documents								

Data Analysis

The data collected for this study were analyzed in two phases; one for the implementation period and the other during the sustainability period. The analyses are presented together followed by a complete description of the actual analysis for each individual phase. Table 4 a Design Matrix of the Study (p. 73) depicts the way in which the data analysis fits into the overall design of this two-phase case study.

Data analysis is a systematic process of searching and organizing the interview transcripts and other materials collected, for the purpose of increasing the researcher's understanding and for presenting the discovery to others (Bogdan & Biklen, 1992; Coffey & Atkinson, 1996; Merriam, 1998). While searching through descriptive data, common phrases, words, participants' ideas and views emerge and are categorized. The sorting of these phrases and words is called coding (Miles & Huberman, 1994). Coding involves different levels or stages. Major codes are more general statements. Sub-codes are used to break information down into smaller units of analysis (Strauss & Corbin, 1990). According to Bogdan & Biklen (1992), "analysis involves working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what to tell others" (p.152).

The method of data analyses for this study was partially derived from procedures developed by Vaughn et al. (1996) based on the constant comparative method of Glaser and Strauss (1967), and were guided by the three research questions. For each research question, the constant comparative aspect of the analysis involved coding passages that answered research questions. Then "key words" which were repeated in the data for each passage were identified. These words were used to generate themes that shaped the answers to the research questions.

The coding process involved several steps. First, the data were read and coded in four different colors, one for each research question (including parts [a] and [b] of research question 3). Next, each section was analyzed for repeated words, which were

called "key words." Then, passages that surrounded the key words were read for emerging themes. In this way, answers for each research question were systematically sought, identified, and reported: first by response to research question, second by key words, and third by emerging themes. Figures 2 and 3 support the documentation of this process.

Table 7

Data Analysis Matrix I

Research Questions	**Phase I: Focus Group Interviews**	**Journals**	**Observations and Lesson Plans**	**Phase II: Follow-up Interviews**	**Observations**	**Supporting Documents**
1. In relation to the framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support?	Keywords: Themes:	Keywords: Themes:	Keywords: Themes:			
2. In relation to the framework for best practices and features of sustainability how was collaboration sustained after initial intensive supports were removed?				Keywords: Themes:	Keywords Themes:	Keywords Themes:
3. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) (a)inform collaboration from the time of initial intensive support and (b)after initial intensive supports were removed?	Keywords: Themes:	Keywords: Themes:	Keywords: Themes:	Keywords: Themes:	Keywords Themes:	Keywords Themes:

Table 8

Data Analysis Matrix II

Research Questions	Phase I: All Data	Phase II: All Data	Literature Findings
1. In relation to the framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support?	Key words: Themes:		Features of Collaboration framework (Friend & Cook, 2000):
2. In relation to the framework for best practices and features of sustainability (Gersten, et al., 2000; Gersten & Vaughn, 1997), how was collaboration sustained after initial intensive supports were removed?		Key words: Themes:	Features of Sustainability framework (Gersten, et al., 2000; Gersten & Vaughn, 1997):
3. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) (a)inform collaboration from the time of initial intensive support and (b)after initial intensive supports were removed?	Key words: Themes:	Key words: Themes:	Zone of Proximal Development Rubric:

Two matrices were used to organize the data from the coding and to assist in "seeing" patterns and themes in the data. Information was cut from the data sources and pasted on the matrices in the appropriate section.

The first (Table 7), lists the research questions on the vertical axis with data sources from Phases I and II along the horizontal axis. In each intersecting frame of the matrix, key words were recorded and used to help generate themes, which were also recorded. This served as the first level of analysis after coding.

To assist in "seeing" patterns and comparing the findings of this study with the literature, the second matrix (Table 8) was utilized. The horizontal axis of this matrix, summarizes the key words and themes across data sources for Phases I and II, and then lists factors or principles from the literature that address each research question. This allows for systematic cross analyses of the findings across both Phases in comparison to the literature base.

Phase I: Data Analysis for Data Gathered During the Implementation of the Intervention

The Design Matrix for the Case Study that was presented in Table 4 (p. 73) provides a pictorial representation of the data analysis in relation to the complete case study design. Data collected during Phase I of this study address Research Questions One and Three. First, data from each source was (1) organized. The participant researcher then (2) established familiarity with the data. (3) Data were then color coded by passage, with highlighter pens in relation to the passages' ability to answer the research questions. Key words (4) were then identified from the color-coded data (these were words that were repeated more than three times). Passages where key words were located were then re-read for the identification for possible emerging themes (5). Data were then (6) compared to features/ factors found in the literature, and finally (7) the findings from the analysis were reported. From the initial color-coded passages that appeared to answer

research questions, both key words and the themes that appeared in the passages around them, were recorded on the analyses matrices. These were enlarged on large poster boards so that color-coded photocopied passages, post-it notes with key words, and themes could be manipulated. Major themes were confirmed from several readings of the transcripts, several viewings of the videotapes, reading and rereading journal entries and observations, poring over lesson plans, and rereading supporting documents.

In addition, during Phase I Research Questions One and Three, generated key words, which marked themes that were compared to features and/or factors drawn form literature including a rubric for determining evidence of participation within the zone of proximal development (ZPD). Key words, themes, and the features/ factors drawn from literature were then recorded on the second matrix (Table 8, p. 94).

Factors and features from collaboration and sustainability literature sets came directly from the literature reviewed. Features for operation within the ZPD on the other hand, were developed using a step-by-step process by the participant researcher. She developed this 8 trait, 4 level rubric from an informal analysis of the sociocultural literature reviewed. In developing this rubric the researcher: (1) identified the most salient traits of learners working in the ZPD from the features of learners working in their ZPD found in the literature; (2) ranked these traits in descending order from the most obvious and least operational (beginning operation in the ZPD) to the least obvious and most operational (complete operation in the ZPD); (3) grouped the traits into four levels based on their relation to one another (Level 1 is beginning operation in the ZPD; Level 2 is intermediate operation in the ZPD; Level 3 is advanced operation in the ZPD; and

Level 4 is complete operation in the ZPD); and (4) created a tool for identifying a learner's operation within the ZPD. Table 9 represents a graphical representation of this rubric.

Table 9

ZPD Operation Rubric

	Features of Operation within the ZPD
Level 1:	**Beginning operation within the ZPD** Learners are dependent on others with more experience during routine interactions (Lave & Wenger, 1991; Rogoff, 1991) Collaboration with more capable peers (Tharp & Gallimore, 1988)
Level 2:	**Intermediate operation within the ZPD** Activities that are intended to support intentional learning (Johnson Santamaría, et al., in press; Palinscar, et al., 1993) Interactive engagement among participants (Chang-Wells & Wells, 1993; Moll, et al., 1992)
Level 3:	**Advanced operation within the ZPD** Contextual co-construction of knowledge among participants (John-Steiner, et al., 1994; Moll, et al., 1992) Learners' reciprocal participation in a community of practice (Cole & Engeström, 1993; Moll, et al., 1992)
Level 4:	**Complete operation with the ZPD** Internalization of the information/knowledge co-constructed manifested (Johnson Santamaría, et al., in press; Rogoff, 1994) Changed or improved practice (Brown, 1992; Moll, et al., 1992)

Throughout the of data analysis, as a passage that answered one of the research questions was identified it was photocopied, color-coded, and then posted on the appropriate matrix for future key word and later theme identification. Data were then reviewed until first key words, and later themes, were exhausted. This process continued, and was identical for questions one and three. Member checking of the data came from readings of the original transcripts by those interviewed upon transcription (Merriam, 1998). After major themes were identified, they were member checked as well. For example, if a key word was repeated in a passage that seemed irrelevant upon reading the passage within the context of the interview, it may have resulted in phenomena that did not corroborate with the rest of the data. Based on ambiguous information, the researcher reread data sources, which sometimes resulted in adjustments in the matrix completion.

Phase II: Data Analysis for Data Gathered During the Sustainability of the Intervention

In this section Research Questions Two and Three were compared to frameworks for best practices in collaboration (Friend & Cook, 2000), sustainability (Gersten & Vaughn, 1997), and the ZPD; otherwise the process for data analysis of Phase II data were identical to that of the data from Phase I. These analyses included the following steps: (1) organization of the data, (2) participant researcher familiarity with the data, (3) coding of the data, (4) identification of key words, (5) theme generation based on key words, (6) literature comparisons and, (7) reporting data.

As in Phase I, throughout this analysis, the researcher looked for agreements and checked for similarities between data. Through a group process of member checking (Merriam, 1998), the researcher met with participants to discuss areas in which there

were gaps of information or clarification needed on themes generated. Based on these gaps and needs for clarification, the researcher conducted additional follow-up interviews.

Once all major themes had been defined, a cross analysis with supporting documents was conducted followed by the recording of appropriate annotations on the matrices. When "explicit and grounded" themes were documented (Glaser & Strauss, 1967), themes and subsequent findings were then written and interpreted using the data analyses frameworks as guides (Tables 7 & 8, pp. 93,94).

CHAPTER 4

RESULTS

The purpose of Chapter Four is to present the results of a study which investigated the development, implementation, and sustainability of collaborative educational practices among bilingual special educators, bilingual general educators, paraprofessionals, and members of a university community. The results are presented within the context of a "story" embedded with the answers to Research Questions One through Three. The Completed Design Matrix (Table 10) provides a visual representation of how the results were organized and reported. The actual matrix was completed on a large poster board with actual text segments from the data and post-it notes with annotations placed in the appropriate areas on the matrix during the final analysis. Similar to the matrix, this chapter is divided into two sections: Phase I, the implementation of the intervention; and Phase II, the sustainability of the intervention. The sections are further divided into the "story," followed by the answers to relevant research questions (Phase I: Questions 1 and 3 and Phase II: Questions 2 and 3). While this chapter directly addresses the research questions by using the data from the study, Chapter 5 provides information about how results from this study relate to the literature.

Table 10

Completed Data Analysis Matrix

Research Questions	**Phase I: All Data**	**Phase II: All Data**	**Literature Findings**
1. In relation to the framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support?	Key Words: support, working, together, growing, growth, learning, planning Themes: planning, learning		Collaboration Features: -Open authentic communication -Teacher teams -Administrative support -School University partnerships -Planning opportunities -Training opportunities -Understanding cultural diversity
2. In relation to the framework for best practices and features of sustainability, how was collaboration sustained after the removal of initial intensive supports?		Key words: still working together, teaming, on-going Themes: teaching, teaming	Sustainability Features: -The reality principle -Scope neither too broad nor narrow -Linking changes to student learning -Built-in collegial support -Joint problem solving -Opportunities for practice with feedback
3. How does sociocultural theory and more specifically Vygotsky's (1978) zone of proximal development (ZPD) inform collaboration (a) from the time of initial intensive support and (b)after initial intensive supports were removed?	Key words: "before the researcher approached me" "before..." Implementation: "support" "working together" "growth" Sustainability: "still working together" "after..." Themes: learning, planning	Key words: "before the researcher approached me" "before..." Implementation: "support" "working together" "growth" Sustainability: "still working together" "after..." Themes: learning	ZPD rubric: Level 1: Beginning Operation in ZPD Level 2: Intermediate Operation in ZPD Level 3: Advanced Operation in ZPD Level 4: Complete Operation in ZPD

The Los Alamitos Interactive Interdependent Collaboration Project (LaCiip) Story

This section first describes the situational and contextual environment during the development and implementation of LaCiip (Phase I) with monthly anecdotes from that data that represent this period of LaCiip. Then within the context Research Questions 1and 3 are answered. This section also provides the same information on the sustainability phase and addresses Research Questions 2 and 3.

Phase I: The Development and Implementation of LaCiip

Development. This section tells the story of how LaCiip was developed. Information was obtained from the following data sources: focus group interviews, teacher journals, observations of the interviews, and teacher lesson plans.

The participant researcher for this project was also the bilingual special educator during the development of LaCiip, referred to as Lena (a pseudonym). Lena was in her first year in a bilingual special education position and felt from having worked with students with learning disabilities in her general bilingual classrooms with success, that learners with special needs benefited from learning alongside their peers (Fletcher, et al., 1999). It was by her initiative that LaCiip came into existence.

Determined to create an inclusive learning situation for her students who were to be mainstreamed, one month before the winter break Lena met with both the Kindergarten and first grade teacher teams during one of their weekly team meetings, letting them know that at the beginning of the new year, she would be inclusion her cross-categorical students into their classrooms. She let them know that this would occur in the afternoons with intermittent support from herself and her teaching assistants.

During the meetings she provided the teachers with the names of the students and shared their abilities as well as their disabilities and asked that the teachers let her know as soon as possible who would be able to accommodate which students. She followed-up the next week by sending memos to all of the Kindergarten and first grade teachers, summarizing what had been shared at the meetings. Lena waited two weeks after which she received 2 out of 8 responses. Although the teachers were quiet during the meetings, some of the responses that Lena later received carried the tone of "All right, if we have to," "I will do it because it is illegal not to," and "Are you sure someone will be in here with the student at all times?" Lena's reflective journal entry from November 21, 1996 communicates the situation clearly:

> This is so frustrating! I am supposed to mainstream the students yet no one really wants them in their classrooms. I wonder how this was done before? Their IEPs say that they should be mainstreamed and I know in my heart that they should. I need to talk to the resource teacher from last year to see how she did it.

She learned from the former teacher in her position that this was "Just the way some of the teachers felt about special education." The former bilingual special educator, Beatrice (a pseudonym), had become the bilingual resource teacher at the school and pulled children out for small group sessions. She communicated to Lena that in order to accommodate her students inclusion goals last year, she rotated them out one at a time with her teaching assistant, while teaching the rest of the students in the classroom. This was perceived by Lena as inefficient and unjust to the students who could clearly benefit from inclusion. For some students, their disabilities were so mild that she wondered if their test scores had been interpreted correctly and they needed a self-contained setting.

Others, she was sure, would cease their erratic behaviors if they could see how their peers behaved in school.

Lesson plans from late November of 1996 suggest that Lena was thinking and rethinking her strategy for including her students. They reveal her consideration of sending students out in dyads with an assistant. Lena also began reading some of the textbooks from her Master's degree in bilingual special education program. Collaboration and consultation seemed to go hand in hand with inclusion, so she began to think about whom she could collaborate with at Los Alamitos School.

Despite being populated with mostly Spanish speaking children of Latino families representing lower socio-economic status, the hallways of Los Alamitos were teeming with print-rich student samples and vibrant artwork. If these outward representations of student abilities were indicative of the quality of the instruction at the school, the teachers were not letting demographics affect their student expectations. The teaching staff was comprised of what the principal referred to as "grade level teams" that met once a week during planning time, which was designated as Wednesdays from 12:30 until 3:00pm. Despite these efforts to establish collaboration opportunities for teachers, special educators were oftentimes excluded and not encouraged to become a part of these teams. A dichotomy between special and general education was part of the established culture of the school.

In feeling drawn toward collaboration as a "means" to her inclusion "end," Lena approached Crista (a pseudonym), a first year bilingual first grade teacher who later reported being disenchanted with the curriculum and planning being practiced by the

other first grade teachers. She communicated to Lena that during team meetings all that was done was a delegation of which teachers would be responsible for collecting materials for which particular center from a curriculum scope and sequence that was generated by the staff during the previous year. In a January journal entry Crista reflected on that time:

> The reality of being a first year inexperienced teacher truly overwhelmed me and I found myself being sucked into a systematic way of teaching with my new first grade "team mates" that seemed void of my natural tendencies and innovative ideas. I even reached a point where I convinced myself that teaching was not my calling nor vocation. If I hadn't found people like Lena, I don't think I would have survived in this type of environment for much longer.

Lena shared her own frustrations with Crista who told her she was open to trying something innovative if it gave her a chance to be creative and apply all that she had learned in her teacher preparation, "including theory" in her classroom. Crista was referring to theories of constructivism (Ruiz, Garcia, & Figueroa, 1996), second language acquisition (Krashen, 1994), and applications of activity theory (Rogoff, 1995) that she had learned during her teacher preparation program at a California university.

After the two teachers decided they would try teaming, Lena proceeded by talking with the entire group of specialists who regularly worked with her students by asking them if they would be willing to participate in a collaborative endeavor. They all agreed including: Beatrice, the bilingual resource teacher; Annette, the bilingual speech therapist; Polly, a paraprofessional in Lena's classroom; Toni, another paraprofessional in Lena's classroom; Elia, a paraprofessional in Crista's classroom, and Tim and Cathy, two university professors (all pseudonyms). Other than Tim and Cathy, the original participants were culturally and linguistically diverse and all of the certified teachers

were bilingual (Spanish and English). Half of the participants were of Mexican or Mexican American descent. Two were of African American descent including the participant researcher, and one was from Central America. Others who participated in the project were the occupational therapist (Caucasian), school psychologist (Caucasian), and site administrator (Mexican American).

To obtain approval for the project, Lena developed a written proposal (see Appendix C) and presented it to the principal and district administrators (i.e., Director of Special Education, Director of Bilingual Education, Director of Student Services) who approved the endeavor. In generating the project, Lena also spoke with Cathy and Tim about the ways in which they envisioned their participation in the project and how they would suggest she go about documenting change. In this journal entry, Lena reflects on writing the proposal:

> Since I have so much personal stake in this project, a network of individuals that I know can help make it work, administrative support, University support, and a colleague who believes in the implications of the project; I know it will be successful. Writing and presenting the proposal was the easiest thing I have done in a long while. Making it work will probably be the most difficult.

LaCiip was to begin immediately following the winter break.

Implementation. This section is organized in three segments (January with February, March with April, and May). Each segment will include the ways in which the following factors changed during the implementation of LaCiip: (a) context, (b) student grouping practices, (c) participant roles, (d) participants' response to change, (e) planning practices, (f) curriculum, (g) teaching, and (h) teachers' perceptions of students.

To meet the goal of inclusion and more equitable staff distribution, in January staff and students were reassigned. Lena welcomed 8 students from Crista's room into her classroom to join her 7 students, while at the same time one of the paraprofessionals assigned to Lena's room went to Crista's room for part of the day. The reasoning behind these changes were first to increase the student numbers in Lena's room by adding children without disabilities meeting the inclusion needs of her own students, and secondly to reduce Crista's classroom numbers while adding assistance and thus increasing the likelihood of student success in her classroom.

At first student were assigned to the classrooms based on their past academic performance as measured by Independent Reading Inventory (IRI) test scores (required by all students in the school). Lena kept all but one of her students and received the students who were performing below grade level (based on their most recent IRI scores) from Crista's classroom. Crista kept those students who were performing at grade level or above and received one high functioning child with autism from Lena's room. The rationale behind this choice was that Lena, the bilingual special educator, was better prepared to teach students performing at the lower range of their abilities and that Crista, coming out of a whole language oriented teacher education program was better prepared to teach to students working at their grade level or above. The intention was that eventually, Crista would receive an increasing number of students with disabilities while learning effective strategies and methods to achieve particular teaching goals from team-teaching opportunities with Lena and the other bilingual specialists.

The reality was that several student-grouping changes would take place during January and February as Lena and Crista struggled to find the optimal student with disabilities to student without disabilities ratio in both classrooms. The students' multiple levels of English acquisition further complicated this matter.

Evidence for the participants' responses and reactions to these changes were found in the focus group interviews. The first interview was conducted January 31, 1997. It reveals active participation by all members. The staff sat around a large circular table engaged in what appeared to be comfortable conversation. The multifaceted multicultural group often spoke over one another interrupting and laughing, generally appearing to have a good time. Both Spanish and English charged the conversation, which sometimes wandered off topic. As the participants sharde their thoughts regarding the first month of LaCiip, several accounts of "I really like the support" are noted.

> We don't know where this is going to lead us, but I am extremely excited and optimistic about where I am going to be going with my teaching with the help of all of you (Crista).

When asked about her goals for the project Lena referred to goals for her students as well as goals for teachers involved:

> For me one of the goals is student achievement. I mean, for me that was the main goal.
>
> Another major goal for me is to understand teaching at a different level helping me to reflect on what I had originally learned in teacher education. I want to see growth. I want to see people excited and ready to learn, you know, excited about learning as opposed to just doing their job.

The same question elicited complementary responses from Crista:

> My particular goals, now that my whole classroom dynamics are different, have changed. What I want to gain out of this project is not only how to teach "at-risk"

> children, but children that I have been struggling with in terms of their reading and writing.
>
> I decided that the reason why I was going to join this project was going to be learning, maybe as rapidly as the children learning in Lena's class, those strategies from Lena and all of you that I can use with these kids. I have learned so much already.

While Lena's agenda included seeing growth in students as well as her fellow teachers, Crista felt that she would was growing and being supported in a positive manner as she learned to better meet the needs of her students. Crista's journal entry from early February built upon her desire to learn as a part of her participation in LaCiip. It reads:

> I will be coming into Lena's classroom eventually and I will be watching her in action and then participating. There will be a lot of scaffolding going on. I will be like a sponge just picking things up. Not like a passive sponge. I am going to be working. It's going to be an aerobic sponge.

Her expectations of the project were high and expressed her desire to succeed both professionally and for her students benefit.

By February however, it was clear that these grouping practices would not work. Students spent 15 minutes each morning walking down the hallway between Lena and Crista's classrooms the way in which first graders do. Although the 100-yard distance was relatively short and the children were escorted by a paraprofessional, they were often distracted by passers by, artwork on the walls, the restrooms, water fountains, and most of all each other. Once inside of their "new" classrooms transition times ranged from 5 to 10 minutes. The other students who did not have the opportunity to go between classrooms busied themselves with interactive songs, stories read by their teachers, or sharing; all activities from which the others "in transit" would benefit. In addition, the children with disabilities needed more models. They were not progressing as Lena had

hoped but digressing in their behaviors. The paraprofessionals seemed burdened with the new challenges created by the project. In a problem solving session with Lena, Crista, Annette, and Beatrice two solutions were proposed: teachers move not students and more students with disabilities be included in Crista's room.

Video footage from late February focus group revealed that participants appeared to be less spirited and enthusiastic about LaCiip than they were in January. Before Cathy began facilitating the interview, Lena, Beatrice, Annette, and Crista conversed quietly moving in and out of Spanish and English. They looked less relaxed and "into" the meeting. Apparently the first grade team called a meeting the previous week requesting their presence as well as that of the principal, to question the LaCiip Project.

Into the interview, the teachers opened up and began to share. As the teachers processed their experiences from this meeting during the focus group they shared the fact that the staff at large and their fellow teachers were not supportive of LaCiip because they did not think it was a good idea for children in special education to be in the same classroom with general education students all day. They also questioned whether parents knew about the project, questioned Lena and Crista's pedagogy, and attacked the notion of Crista not teaming with them. The LaCiip participants responded to the best of their ability to all concerns.

Lena reminded the teachers that she had been a general educator prior to being a special educator and that she was accustomed to having children with and without special needs together all day, as inclusion could be described as Features of children with more mild to moderate disabilities such as those children in her classroom. She then passed out

an article on the benefits of inclusion to the teachers. Lena and Beatrice also shared with the teachers information regarding disability identification and its implications for second language learners. Annette passed around the parent communication that had been sent out to each parent. She then shared with the concerned teachers that at open house (which was the previous week) parents from both Lena and Crista's classrooms visited both teachers and were overall happy and satisfied with the smaller class size for their children. Crista let them know that she felt more comfortable practicing her teaching philosophy and working within the LaCiip model. Members of the LaCiip team, with the final reminder about the support of the district and their principal, left the meeting knowing that their effort was not popular. Crista's journal entry captures the sentiment of that time:

> What is crucial, however, is that I write about the confrontations that we faced amongst our staff, in particular the first grade team, because of this project. What it comes down to is this---professional jealousy and a biting resentment towards Lena.

During January and February, Lena acted as the coordinator of activities for the project. She organized "meetings" among participants, communicated changes, and let everyone know when the university collaborators would be coming in. Crista and Lena co-implemented the project and attempted to coordinate their teaching activities in an effort to create more equitable learning environments for the children involved in the project.

Paraprofessionals were also affected by the changes brought about by LaCiip. Lena describes the role changes experienced by both Polly and Toni in this February journal entry:

> I am giving them a little bit more instructional responsibility as well as other responsibilities in the class. In this way I am relinquishing some of the pre-conceived roles of a teacher. Polly and Toni are such essential and very crucial parts of this working so I want them to feel comfortable in these roles where I know they will grow.

In the February focus group interview, Lena describes modeling teaching strategies for the paraprofessionals as a way in which to cross-train them into leading instructional centers rather than supervising and preparing materials. Crista describes Elia, the paraprofessional that works in her classroom as "shining" when given more teaching responsibilities.

Annette and Beatrice the bilingual speech therapist and bilingual resource teacher were coming into both Lena's and Crista's classrooms and serving children who needed their expertise in an inclusionary manner, rather than pulling them out. Sometimes they could be seen running a center or teaching the whole group. Teaming crossed all disciplines and areas of experience for all of the teachers involved. Annette shares:

> I think what this project created is like an inherent sense in all of us that we're working toward the same goal that we all... respect each other so much that we want to do our best and the expectations are high.

The role played by university collaborators was designed to be facilitative of reflective conversation as they documented the LaCiip process, yet during the March focus group interview after the project had been going strong for three months, Crista had this to say to the professors:

> I am very thankful to both of you for being so supportive and working with all of us, because I think the implications for teachers and getting to know that it is not an intimidating thing to be involved with the university is so incredibly...it is a gift you know.

Lena's journal for that month added to Crista's comment:

> This is exciting! The professors are here every month. It feels like the project is more legitimate and now we know they are real people.

As the comfort level increased among all of the participants, Crista went as far as to ask Cathy and Tim for advice on how to reach a student, Annette questioned them about pursuing a Master's degree in learning disabilities at the university, and Lena prepared to accompany them to a national special education conference.

During January and February, all of the participants were challenged by the changes that took place. The new teaching configurations caused them each to venture to a new teaching "place" where none of them had ever gone. Routines were being established including parallel planning and simultaneous teaching by Lena and Crista. "Like everything parallels. I mean I have almost the exact same structure and times...everything is just about the same," explains Crista. Lena elaborates, "We sit down and plan together because we built planning time into our schedule." They were able to arrange this co-planning by combining all of their children together for music and art, where they send all of their paraprofessionals, gaining two 45 minute blocks a week for planning. During these designated planning times Crista shared that she was actually "...bouncing my ideas off of Lena and we both...really feel the structure and practicality of what our thoughts are." Co-planning was necessary if Lena and Cristas' students were to receive equitable experiences for the second half of their first grade. Time for planning was also necessary and the teachers found that they needed to create times in their schedule for this activity.

One of the reasons co-planning was such a necessity for Lena and Crista was because Los Alamitos had a stringent reading program that utilized books from the

Reading Recovery program and monthly assessments using the IRI to track student progress. Materials such as big book, little readers, and poems on chart paper in themes were organized and rotated throughout the members of each grade level team so that students were exposed to the same materials and curriculum. Prior to the LaCiip Project, and during previous years at the school, the bilingual special education classroom was not included in the rotation. Lena struggled to be included in this rotation, as she believed her students should also be taught using the same curriculum as their peers. Not until LaCiip, because Crista was a "part" of the first grade team, did the children in Lena's class have access to the general curriculum. In February, Lena and Crista heard that they had been selected, along with Annette and Beatrice, by their district to participate in several workshops that would introduce another curriculum to them, one designed for bilingual learners in special education classrooms (OLE). They were excited about this prospect.

Regarding teaching, Lena continued with her organized whole group presentation of an idea or concept, followed by an example, followed by small group work/instruction in centers, followed by independent practice for students. She practiced formative assessment, regularly took anecdotal notes, and utilized checklists to document student progress. Accommodation for individual learners' needs was something that Lena was accustomed to and she regularly adjusted assignments to appropriately match the instructional levels of the students she taught. Crista, on the other hand, taught in a more holistic manner. Her teaching delivery also began with whole group presentation and teacher example of the concept or idea, then students were free to experience the learning

in whichever way they were best able to. Crista encouraged and left room for her students to learn at their own pace and in their own ways, leaving room for multiple expressions and responses in a safe and nurturing environment.

During January and February both teachers expressed their belief that although the students were affected by the changes, they liked them and were resilient based upon their continued learning (as marked by successes in reading and growth in student journal responses). Lena and Crista noticed positive behaviors for two of their students who had noticeable characteristics associated with moderate mental retardation and autism, respectively. The first was assigned to Lena's classroom and began to mimic his non-disabled peers academic behaviors. For example, after a month, during small group instruction he began to sit at the worktable in a chair quietly with his feet on the floor, using a pencil making marks on paper. This behavior was in contrast to his past behaviors, which included grunting and crawling around on the floor during small group instruction time. The other student, who was normally quiet and withdrawn in Lena's classroom, became the class favorite among his peers for storytelling during the sharing time each morning.

During March and April many changes occurred within LaCiip. Lena and Crista continued to modify grouping practices, participants' roles continually shifted, the groups' responses to challenges grew more united, co-planning practices continued, a new curriculum was added, teaching practices transformed, and teachers' perceptions of students changed.

Lena began her March journal entry with:

> It has been a challenging month for us. We changed the groups of kids and it has been very challenging. We decided that all of the students with disabilities will stay in this special education classroom all of the time and we will rotate Crista's students in and out every week. If movement needs to take place we will do it. We have been trying to move kids around from classroom to classroom, and the world nearly crumbled under our feet

Focus group transcripts reveal the same sentiment in comments made by Crista, Beatrice, and Annette. They each describe reasons for this executive decision. Crista believes it is the lighting and open spaces that are "over stimulating for the children" when they come into her classroom. Beatrice thinks it is the "interruption in their routine," while Annette is convinced that "lack of structure" is the culprit. Although the teachers were teaching from the same lesson plans, their discipline styles and presentation was different.

Participant roles shifted during March and April due to several factors. Lena began to collect student measures for each student by helping university collaborators administer a standardized achievement test and two behavior, self-concept scales. Because of this shift in her role, Toni and Polly took on more instructional roles in her classroom. Crista scheduled planning time and informal "meetings" among participants. Annette and Beatrice were more active in the planning process giving feedback when possible and Elia coordinated communication among the paraprofessionals. Cathy and Tim sometimes sent graduate students into Lena and Cristas' classrooms to collect data, but mostly continued to facilitate the focus group interviews.

The participants' responses to change varied during these months. Some reacted to the challenges that came with the project. For example, in a manner that sounds more like learning Crista describes herself teaching during LaCiip:

> ...and every minute I am adapting. Every minute I am trying a new strategy and it can be really exhausting. So it has been a little overwhelming this week, but I feel like I have grown, I mean from last Friday to this Friday... a lot is going on inside of me just a lot of different things that I have learned are conflicting.

Crista's conflicts, according to a journal entry stemmed from her natural tendency to teach "Montessori style" freely and unstructured. She was hoping to "adapt her classroom" to make it more like Lena's so "transitions from classroom to classroom would run more smoothly."

Another phenomenon that occurred was a mismatch between the expectations of the instructional aspect of LaCiip, and what actually occurred. Lena poignantly share her concerns about this regarding the project status in the March focus group interview:

> You know, on paper it is smooth...in your teacher-planning mind it is smooth. But when you actually get all of the dynamics working together and all of the personalities and all of the factors it becomes less collaborative and more, I feel from having heard from the members of LaCiip, it becomes less a collaboration and more of this is my group, this is what I am doing. And that is not how it is supposed to work.

Her frustrations are clear at this point during the project and provided an impetus for change. Future lesson plans reveal the inclusion of ideas from Beatrice and Annette and more participation from Elia, Toni, and Polly. Informal meetings among the group increased and communication became more frequent. It was during this time that relationships among the team became more apparent. Video footage during focus groups reveals increased non-verbal communication and intimacy among the teachers as well as the paraprofessionals.

Planning practices continued to be co-planning in nature. These co-planning sessions took place whenever Lena and Crista could find time. The new OLE curriculum

introduced to the LaCiip participants in a series of weekend workshops unified teaching practices among Lena, Crista, Annette, and Beatrice. They attended the workshops together and integrated the holistic inclusionary manner of teaching suggested by the curriculum into their lesson plans and delivery. Lena and Cristas' teaching and delivery styles began to parallel evidenced by mirrored homework assignments, shared teacher created materials, and implementation of the same lessons at the same times of the day.

Their perceptions of students during this time reflect their perceived progress at this point of the project. In their April descriptions of a student with learning disabilities Crista begins:

> CM, she was one of them struggling and struggling from the beginning having a hard time with her writing and everything and yesterday, I gave the students a brief explanation on how to fill out this chart on rock descriptions, and she wrote...she filled out the whole thing in detail.

Lena elaborates Crista's point:

> Yes, when I had CM in my classroom a month ago, she was unable to do that! I have seen her grow since then. I wish I had kept an example because she was unable to do that. She was not writing. She did not have the confidence yet It seemed like she didn't feel she could produce anything.

May brought increased successes for the LaCiip Project. Grouping practices, it had been decided, would continually shift, with all of the students with disabilities remaining in Lena's classroom. The teachers had learned that there was heterogeneity enough by mixing children with differing abilities in and out of both classrooms on a bi-monthly basis. This satisfied the children as well, who all wanted time in both classrooms.

Participant roles were clarified and teachers and paraprofessionals assumed a "specialty" as their contribution to the project and each participant gave them autonomy and support to do so. For example, Toni, one of the paraprofessionals, became the whole group P.E. teacher. She would take all of the students from both classrooms outside and let them "burn off some steam" as a group, for both social and therapeutic purposes every afternoon for thirty minutes. This allowed Lena and Crista time to plan and coordinate activities and materials for the next day or impromptu meetings with the rest of the team. Polly, another paraprofessional became the center conceptual "webbing" champion. She would create the most elaborate webs for students when introducing a new theme or concept. For example, when the teachers focused on "Yuck Soup," Polly created a "web" on a large piece of chart paper with the word "yucky" in the middle. Students were then asked to tell her all of the things that they thought were "yucky." She then wrote and drew (to the best of her ability) the children's responses and attached each one to the center word "yucky." The children loved her "webs" and the other participants in LaCiip often called on Polly to use this activity to introduce topics or new words to assist the children in their comprehension of new information. Elia honed her skills as the "organizer" and "gatherer" of any material needed by either classroom. Annette and Beatrice became expert "wherever we are needed most" personnel as well as providing their specific skills to those children who needed speech and learning disabilities resource support. Lena remained the administrative leg of the operation while Crista became an expert Optimal Learning Environment (OLE) teacher (a set of conditions and strategies

developed for second language learners with disabilities [Ruiz & Figueroa, 1997]). Toni described the LaCiip team as "blood relatives" at this point in the project.

Reacting to the success of LaCiip as reflected by the results according to the data sources for Phase I of the project (focus group interviews, observations, teacher journals, lesson plans), when asked if LaCiip would work for other teachers, Lena responds:

> If other people want to do this, you have got to find people who have the same philosophy as you do, but at the same time get people involved that can learn from one another because it can't be done in a vacuum. It is very interactive.

"Yeah," continues Crista, "now I have found people who have ideas about education that are parallel to mine and that believe the same things that I do. People who are coming from the same philosophical background that I am coming from, it makes life so much easier."

In regard to participants' perceptions of the ways in which students were affected by the project participants had this to say:

> R. is acting like he does not have a disability at all. The bilingual district psychologist couldn't believe the changes in his behavior since the last time she observed him (Annette).
>
> It seems like the children are learning more then before (Beatrice).
>
> Students are learning because we learned to accommodate them (Toni).
>
> I see academic growth, but I have also seen them grow affectively towards each other. The kids accept each other no matter what. They did not at first (Crista).
>
> I think there is now an appreciation for the kids who have disabilities. O. went from a child that would sit in the corner of the room to a child that is at the center of the classroom AND he is reading. Everyone wants to work with O. (Lena).
>
> The project was a true collaboration that resulted in growth on many levels.

Cathy ended the last focus group interview with these comments:

> Tim and I want to thank you cause this has been really fun to share, and we've talked about being unique in the fact that university, school, and district wide people have generally been supportive, but what I think makes this all really good is that we collaborate not just within one school, but across communities and that is the big difference. Thank you for sharing.

Research Question One: In relation to the research-based framework for best practices and features of collaboration, how did collaboration function during the time of initial intensive support? To address this research question, data were gathered from the fall semester prior to implementing LaCiip and during the January to May implementation period. The information will be presented chronologically.

Data sources included focus group interviews, teacher journals, and lesson plans. In analyzing the data key words that marked the content of the development of the project included: "support," "working together," "growing," "growth," "stretching," "learning," and "planning." All of the key words from the development and implementation period of the project were reviewed and analyzed to identify major themes used to address Research Question One (Table 4, p.73).

Prior to the implementation of LaCiip, collaboration functioned inconsistently, somewhat ineffectively, and on a narrower scope than during implementation in many different ways. Some of these predecessors to LaCiip were effective, while others were ineffective. Lena relied on collaboration as a means of meeting the needs of her students by reaching out to Beatrice, the teacher who she was hired to replace. Lena's November 1996 journal entry provides an example of Lena's reliance on Beatrice's experience by the excerpt: "I need to talk to the resource teacher from last year, to see how she did it." Ironically, at the same time, Crista, was the member of the first grade "team" in which

she did not perceive herself as a valued member. She felt there was a mismatch between her desire to be innovative and the team's routine of dividing the responsibilities for preparing centers. According to a retrospective comment made by Crista later, this arrangement left her feeling, "...stifled and limited."

In contrast, remarks during implementation from the first focus group interview also reflect the manner in which collaboration functioned during the initial time of support. In January of 1997, Cathy, one of the university professors, enthusiastically opened the first focus group:

> I guess I want to start by thanking everybody. This is so exciting for Tim and I to be a part of this project and to really be thinking about how we can make school a more successful place for all kids. It was real clear when I talked to Lena and Crista and all of the people involved, that the commitment is here. This is a special project in terms of that. We are going to have a group discussion today, that is what a focus group is. It is a time to talk about how you feel and think about teaching and this project.

By addressing the participants as "we" rather than "you," she set the tone for the remainder of the project as one that would be supportive in nature. Her expectations for participants were made clear by such words as "commitment" and school being a "successful place for kids." Participants were therefore eager and willing to work hard and share their reflections in this safe community of professionals.

The implementation period of LaCiip portrayed collaboration as a more unified vision of a means to better meet the needs of all of the students involved (general and special education). Goals communicated by Lena in the January focus group included, "understanding teaching on a different level," and the desire to "see others grow." According to the data, a great amount of planning occurred during this stage of

implementation as a result of the anticipated increased collaborative practices inherent to the project. Crista's goals were focused on "learning." Therefore during the initial time of support, collaboration functioned as a vehicle for goal realization.

Collaboration also functioned as a "scaffold for interactive learning," according to Crista. Additionally, data sources reveal that at the initial time of support collaboration fostered several "ways of collaboratively being" for LaCiip participants. First, collaboration fostered more instructional responsibility for paraprofessionals and a "relinquishing of preconceived teacher roles," as stated by Lena in her February journal enrty. Role changes in participants thus came as direct result of the collaboration process. Collaboration also fostered support among the school and higher education communities. Crista expresses her gratitude for participating professors "being so supportive and working with all of us," as being key to her participation in the project. In addition, collaboration at the onset of LaCiip fostered high expectations among participants. During February's focus group interview Lena expresses this sentiment:

> The expectations are extremely high. Every one of us wants to work with people who will allow new opportunities for growth and I think we respect each other for allowing one another to do that. And I think this project has provided us with a general sense that we are all working toward something together and that we are all essential parts in making this work.

Collaboration also bred resistance from others who were not participating, increased professional challenges, resulting in the unification of participants' project goals, ultimately fostering changed professional practices. Resistance from others is reflected in the participants' reactions to the first grade team's request for a meeting to question the outcome goals of the LaCiip Project. Later, Lena begins her March journal

describing the "challenges" inherent to grouping students appropriately for instruction throughout the project. She states in the focus group meeting that same month, "On paper [the project] is smooth...in your teacher planning mind it is smooth," implying the increased challenges that have arisen as a result of working with a group of professionals as opposed to working alone. Crista expresses her personal challenge with these words, "... a lot is going on inside of me, and just a lot of different things that I have learned are conflicting..." Incidentally, these challenges fostered members of LaCiip effort change their teaching practices.

Thus, in answering Research Question One, collaboration during the initial stages of LaCiip functioned as support, teaming, scaffolded learning, and role changes for participants. The features of LaCiip as evidenced by the data analyzed (i.e., focus group interviews, observations, teacher journals, lesson plans) which also indicate ways in which collaboration functioned at the onset of the project were: joint planning, formal and informal meetings, evolving grouping practices, site administrator support, human and material resource allocation, role changes, increased communication, university collaboration, participant additive views of language and culture, and support of a larger educational community. Table 11 illustrates these features and the later sustainability of these features throughout the course of the project.

Table 11

LaCiip Features and their Sustainability

Features	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001
Joint planning	X	X	X	X	X
Informal and/or Formal meetings	X	X	X	X	X
Evolving Grouping practices	X	X	X	X	X
Site administrator Support	X			X	X
Resource Reallocation	X	X	X	X	X
Role changes	X	X	X	X	X
Increased Communication	X	X	X	X	X
University collaboration	X		X	X	X
Additive instrumental views of language and culture	X	X	X	X	X
Support of a larger educational community	X				X

Themes that emerged during the data analysis from reading passages where key words were found addressing the function of collaboration during the initial stages of LaCiip, included planning for collaboration, and participant learning throughout

collaboration. Additionally, collaboration promoted resistance from non-participants, increased teaching challenges for teachers, and eventually led to teacher change.

Reseach Question Three: How does sociocultural theory and more specifically Vygotsky's zone of proximal development (ZPD) inform collaboration from the (a)time of initial intensive support...? This question will be answered based on the use of the zone of proximal development (ZPD) rubric to evaluate key words from the data sources first during the development, and then the implementation of the intervention.

To determine participant operation within the ZPD during this phase of the project, key words were evaluated using the ZPD rubric developed by the researcher for this study. Table 12 presents the rubric. At each level of the rubric evidence from the study that supports participant operation in the given level is included.

Table 12

Participant Operation in the ZPD During Implementation of the Innovation

Features of Operation within the ZPD
Level 1: Beginning operation within the ZPD Learners are dependent on others with more experience during routine interactions • Lena's choice to approach Beatrice • Crista's self-reported dependence on others with more experience • Dependence of LaCiip participants on Tim and Cathy Collaboration with more capable peers • Crista collaborating with Lena
Level 2: Intermediate operation within the ZPD Activities that are intended to support intentional learning • Lena's desire to see others (adults and children) grow • Crista's desire to see children grow Interactive engagement among participants • Crista's perception of herself as an aerobic sponge
Level 3: Advanced operation within the ZPD Contextual co-construction of knowledge among participants • Lena and Crista co-planning • All teachers co-planning Learners' reciprocal participation in a community of practice • Paraprofessional teaching • Participants' specializations with support of others • University professors facilitation of the focus groups • High expectations among members
Level 4: Complete operation within the ZPD Internalization of the information/knowledge co-constructed manifested • Lena's philosophy on teachers working together being of like minds • Annette's notion of high expectations Changed or improved practice • Lena's transformation of challenge into change as a solution • Crista's adoption of more structure in her teaching practices • Cathy's notion of collaboration across communities

Level 1 or beginning operation within the zone of proximal development (ZPD) describes learners who are dependent on others with more experience during routine interactions, which may result in collaboration with more capable peers. Phase I data indicate these interactions as taking place between Lena and Beatrice, Crista and others who she perceives as having more experience, LaCiip participants and university collaborators, as well as between Crista and Lena.

As indicated by her November 1996 journal entry, Lena's choice to approach Beatrice, the bilingual special educator who had her position the year before, demonstrated her dependence on someone else during routine interactions as well as collaboration with a more capable peer. In January Crista showed evidence of beginning operation in the ZPD by describing her anticipated growth "with the help of all of you," during a focus group interview and her rationale for being "a part of the group to learn." In these ways, Crista expresses her dependence on others with more experience including who she perceives to be more capable peers. Similarly, prior to the implementation of LaCiip Lena, Crista, and the LaCiip staff depended upon the university experiences of Tim and Cathy. The university professors assumed these roles as can be noted by Cathy's facilitative tone in addressing the focus group in the excerpt. As well, Crista by agreeing to collaborate with Lena, a more capable peer demonstrated beginning operation in the ZPD. Thus, according to the ZPD rubric, prior to the implementation of LaCiip, or during what can be considered its developmental stages, many participants were operating on Level One beginning operation in the ZPD (Figure 6).

Activities that are intended to support intentional learning and interactive engagement among participants indicate intermediate operation within the ZPD or Level 2 on the rubric. During the development and implementation of LaCiip, Lena's desire to see both children learn and adult's grow as well as Crista's desire to see children learn are evidenced by their responses to their goals for LaCiip. In addition, Crista's perception of herself as "an aerobic sponge" indicates her interactive engagement with other participants in the project.

Advanced operation within the zone of proximal development (ZPD) or level 3 involves the co-construction of knowledge among participants and learners' reciprocal participation in a community of practice. Teachers co-planning throughout the project, teaching among all participants, university collaborators' roles, and expectations among members, is evidence of these activities.

Advanced operation in the ZPD is represented by the co-construction of knowledge by teachers in their co-planning in February (Lena and Crista) and for the rest of the project (Lena, Crista, Annette, and Beatrice), as well as reciprocal participation in the community of practice evidenced by the paraprofessional's teaching and role redefinition. "High expectations" communicated by Annette and Lena also reflects this reciprocity and "specialization" assumed by various members of the community (e.g., Toni the P.E. teacher; Polly, the "web master"). Members of LaCiip also identified university professors as being a part of this reciprocal effort and co-construction of information by their guidance, support, and facilitation of focus group interviews.

The highest level or complete operation in the ZPD (Level 4) is represented by the internalization of the information co-constructed and changed or improved practice. Lena, Crista, Annette, and Cathy expressed their operation in this level in several ways. Lena, by her belief in regard to philosophical "people-matching" before attempts at collaborative endeavors with others and changes that she made as a result of being challenged by the lack "of authentic collaboration" taking place; Annette by her adamant communication regarding "the very highest of expectations;" Crista by her switch from less structure to more structure in the end for her students as evidenced by her adoption and application of the OLE curriculum, and Cathy in her comment about "collaborating across communities."

Thus, Research Question 3 (a), which focuses on participant operation within the ZPD during the implementation of the collaboration project, found Lena and Crista operating at levels 1 and 2 of the ZPD rubric. Other participants joined them on the rubric at levels three and four. The largest number of participants operated in the ZPD at the advanced level (3) where participants were involved in the co-construction of knowledge and reciprocal participation in a community of learners. Participant operation at this level was more collaborative than at other levels.

Phase II: The Sustainability of LaCiip

To determine how collaboration was sustained over a three-year period of time and whether applications of sociocultural theory are appropriate in investigating this phenomena, it is important to accurately describe what occurred during the time that

followed the implementation of LaCiip and the removal of it's formal supports: the sustainability of the intervention.

This section tells the story of the sustainability of LaCiip. It is organized by academic school year from the spring of 1996 through the fall of 2000. For each school year the sustainability of the following features of LaCiip are discussed: joint planning, formal and informal meetings, evolving grouping practices, site administrator support, human and material resource allocation, role changes, increased communication, university collaboration, participant additive views of language and culture, and support of the larger educational community. Table 11 (p.126) contextualizes these features over the three-year sustainability of the project.

Overall, many changes occurred for the participants in LaCiip that could be attributed to the project. Lena and Crista decided to job-share the bilingual special education teaching position. Crista went back to the university to pursue her Master's degree in bilingual special education. Annette went back to the university to pursue her Master's degree in bilingual special education. Lena went to the university to work alongside Tim and Cathy (the following year she was admitted into the Ph.D. program), who by then she had considered her mentors. Due to professional obligations, Tim and Cathy were unable to continue facilitating LaCiip, and so their direct participation in the project at Los Alamitos Elementary School came to an end. However, Tim continued to direct interns to the school to learn the competencies necessary to attain their Master's degrees in bilingual special education.

The 1997-1998 school year brought a new principal to Los Alamitos, one who did not encourage other teachers' participation in LaCiip. Despite this major setback, the following features of LaCiip remained: joint planning, informal meetings, evolving grouping practices, human and material resource allocation, role changes, increased communication, and participant additive views of language and culture. Table 13 illustrates who participated in LaCiip over the course of the study.

Table 13

Participants (Named) During Phase I and Phase II of the Intervention

	School Year				
	Phase I	Phase II			
Title	96-97	97-98	98-99	99-00	00-01
Bilingual Special Educator	Lena	Lena & Crista	Lena & Crista	*Suki	*Suki
Bilingual General Educator	Crista				
Bilingual Paraprofessional (s)	Polly & Toni	*Angie & Mari	*Pilar	Angie	*Cher & Angie
General Paraprofessional	Elia				
Speech Therapist	Annette	Annette	Annette	Annette	Annette
Resource Teacher	Beatrice	Beatrice	Beatrice	Beatrice	Beatrice
Professor(s)	Cathy & Tim				
Intern(s)			Rochelle & Suki	Rochelle	Anna
Inclusion Coordinator					*Rochelle

(*) Newly hired personnel.

As part of their job-sharing agreement, Lena and Crista, co-planned together on Wednesdays. Lena taught in the bilingual special education classroom Mondays and Tuesdays, they both taught Wednesdays, while Crista taught Thursday and Friday. In January, they switched teaching days but kept Wednesday as a consistent co-teaching and co-planning day. Informal meetings resulting in increased communication included Annette and Beatrice. These took place weekly during lunch or after school. Although Beatrice reduced her time in the classroom due to her increased caseload; the two specialists continued working in the bilingual special education classroom for about two hours weekly

Grouping practices evolved inside of the classroom when Lena and Crista taught in another first grade teacher on maternity leave's classroom. They brought their students with disabilities and assigned paraprofessional into the general education classroom with them. With the paraprofessionals Lena and Crista taught the students in small groups configured in different ways, depending on activity, student ability level, or language use. The paraprofessionals working with them at the time enjoyed the arrangement as well as the increased "real" teaching opportunities it allotted for them. In this way the teachers continued their practice of resource reallocation despite their lack of administrative support.

Lena, interested in how the collaborative practices evolved and sustained, asked some of the former members of LaCiip about their perceptions of the project during interviews one year later. Annette the bilingual speech therapist expressed during the

spring of 1998, "we won't stop this even if we don't like it because it is good for the kids."

The following school year (1998-1999) Lena and Crista continued team teaching and began to accept university interns into their classroom for the student teaching component of their bilingual special education programs. Lena had applied and been accepted into a doctoral program and thus university connections, though less structured, remained. As the university supervisor of interns from the university, Lena was responsible for observing them, interviewing them, and keeping interactive journals with them to guide their learning process. From her observations, Lena frequently noted the intern's positive reactions to their ability to see multiple facets of the bilingual special education service delivery at Los Alamitos because of the connections previously established in LaCiip.

Co-planning between Lena and Crista now included the interns. Informal meetings attended by the bilingual special educators during lunch and after school for coordination of services continued. Grouping practices inside of the classroom were developed to increase student learning with the added "people power" provided by interns. These included centers that ranged from 1:2 to 1:4 student teacher ratios and allowed for one-to-one instruction if necessary. In addition, interns were able to assist in the inclusion requirements of students by accompanying them into bilingual general education classrooms. By her approval of the interns participation at Los Alamitos Elementary School, the principal was an indirect contributor to the sustainability of collaborative practices among the teachers involved.

Annette and Beatrice still saw children in an inclusionary manner, general education teachers felt more comfortable allowing some of their students to come into Lena and Crista's classroom, and interns were generally able to see a more complete and coordinated picture of bilingual special education.

Bringing their collaboration to a new level, that fall of 1998 Lena, Crista, and Annette presented LaCiip to special educators in Washington D.C. at a national special education conference. In this role change, they worked together on their proposal and practiced their presentation reminding themselves of the collaborative practices they began in their classrooms the previous year. Annette shared how this experience "helped her to remember how beneficial the LaCiip Project was for students." The teachers went to the event along with Tim and Cathy. Both Crista and Annette were due to graduate with their Master's degrees spring of 1999 and felt ready to take this professional step. Lena who had presented with Tim and Cathy the previous year, organized the data, coded emerging themes, and cross-checked her findings with those of Crista, Tim, and Annette. The experience was beneficial to all. The "collaboration across communities" helped to sustain collaborative practices within the bilingual special education team at Los Alamitos.

Lena continued working toward her Ph.D., and as a result also worked as a graduate assistant under both Tim and Cathy. In this capacity, she was able to teach a methods course that included the Optimal Learning Environment (OLE, Ruiz, Garcia, & Figueroa, 1996) for which she was a certified trainer. Students in the bilingual special

education program were required to take this course to graduate from the program. Several of these students interned in Lena and Crista's classroom.

That same year paraprofessional support suffered as paraprofessional after paraprofessional had family emergencies, maternity leave, and necessary absences. The teachers depended on university interns to allow for meaningful centers and small group instruction for their students.

Suki, one of the university interns asserted herself as a special educator with superior potential during that time, which was a relief to Lena and Crista. For Lena the relief was timely as her doctoral program placed increased demands on her time, which dictated her eventually leaving the classroom. For Crista because she felt burn-out often experienced by special educators with limited site administrator support. Both of the teachers had spread themselves increasingly thinner and felt they would benefit personally, intellectually, and professionally outside of the classroom. They groomed Suki to be their successor as well as another university intern, Rochelle, to support her during her first year. Despite these changes many features of LaCiip were sustained although evolved in form (Table 11, p.126).

The following year (1999-2000) Lena took an even closer look at LaCiip and bilingual special education. At that point, joint planning occurred between Suki and her interns as they attempted to coordinate teaching activities and university class assignments. Informal meetings ensued marked by increased communication. Lena often observed them taking place before school as the interns arrived with Annette dropping in to find out what was on the day's agenda. Annette and Beatrice were still

there working in the classroom. Annette taught in the same capacity that she did at the onset of the project, Beatrice as much as she could with her large caseload. Administrator support was the same as it had been since the arrival of the new principal. Center and small group teaching practices within the classroom continued and role changes had occurred with Suki teaching and Lena serving as researcher. With Suki teaching in Lena and Crista's place, Lena conducted follow-up interviews to shed light on what was originally found during the 1996-1997 school year.

When asked about collaboration in bilingual special education at Los Alamitos during the fall of 1999, Suki declares:

> I believe that the training in OLE has affected participants collaborating in my classroom as well as Lena and Crista's former classroom. Since all of the teachers and paraprofessionals that have been involved in this project over all of these years have all been from so called underrepresented groups, we embrace the strategies and conditions of OLE that we know from experience will work for students.

Angie, the paraprofessional working with Suki likened the nature of the sustained collaboration to be related to the differing philosophy of educated people who are not "Americano." She believed that the collaborators in the project past and present "know" as a gut feeling what is best for the children in bilingual special education and that working together with one another rather then doing what someone else tells them is good for the kids, works. "Someone else", she contended are "Americanos." She did not believe that individuals who were non-Latino and non-Spanish speaking could inform teaching practices in a bilingual special education classroom and that the non-"Americano", Spanish speaking teachers working together at Los Alamitos could. When

the researcher explained to her that collaboration was a research-based intervention she laughed:

> No it's not. It is the natural way to take care of and teach kids. Families have been doing it this way in Mexico for years. It is a group effort: mother, aunt, godmother, older cousin, teacher, principal, everybody.

This response adequately captured the essence of the mostly intangible additive instrumental views of language and culture held by the original participants in the LaCiip effort and those who were actively sustaining collaborative practices. These views can be noted throughout the study by bilingual instruction, culturally relevant classroom celebrations, parent involvement, and books and materials in both English and Spanish. Angie articulated this perspective best when she described the "way" in which the bilingual special education teachers met the needs of their students.

In regard to Suki and Rochelle's communication one of the university interns who worked with them had this to add from her journal entry:

> Within the walls of Los Alamitos there is a good teacher. Suki seems to be at home when I take her curriculum into consideration. It seems that when a teacher teaches what she believes in and has taken an active part in its development, she is most effective. Suki seems to be happy teaching, yet not free from the typical issues that stress teachers. Nevertheless, she seems very dedicated. Also Rochelle and Suki seem to be living the type of co-teaching relationship we hear about in books but never see in real life.

The intern referred not only to what she has observed among Suki and Rochelle, but their general interactions with the rest of the bilingual special education team as well. After two and half years there were many remaining features of LaCiip (see Table 11, p126).

This school year (2000-2001) brought a very interesting change to the dynamics of the sustainability of the professional collaboration effort at Los Alamitos originally inspired by Lena and Crista. Three years from the onset of the LaCiip Project, collaboration in the bilingual special education program was going strong, and has been institutionalized by the hiring of a bilingual special education inclusion coordinator. The same administrator who was originally non-supportive of LaCiip hired a certified special educator to formally foster institutionalized collaboration among bilingual special and general educators in an effort to meet the needs of children who were to be mainstreamed. This was the same goal that Lena had three years earlier.

The new staff member was Rochelle. She was the intern who began her university observation and participation classes in Lena and Crista's classroom in the fall of 1998 and who worked with Suki as an intern since that time. Like Suki, Rochelle took classes from Lena and Tim at the university, was supervised by Lena, and still had strong ties to the university. During an interview Rochelle explained:

> Lena, it is almost like you and Crista never left. Suki just builds upon what you guys had already established, except for now there is even more interaction and communication among the team because they know each other better. A lot more teaming you know. Annette and Beatrice still come in. It is a little hard for me because I still don't really know what I am supposed to do. Nobody has defined a role for me or said, "Here, do this." I am kind of feeling my way around.

The collaboration has now expanded to the 2/3rd grade and 4/5th grade bilingual special education teams. Team members lunch together regularly, are seen chatting in the hallways, are frequently in one another's classrooms, and apparently hold weekly meetings.

Lena is now supervising two university interns at Los Alamitos. One intern is in Suki's classroom where Suki is the cooperating teacher, while the other intern is the 2/3rd grade bilingual special educator at Los Alamitos Elementary School. The 2/3rd grade bilingual special educator went back to the university to pursue her Master's degree in the summer of 1999. Annette is her cooperating teacher. In a recent interview the teacher expresses:

> The bilingual special education team here is doing great! We have weekly meetings to discuss our problems, we give each other a lot of support and we are all working quite closely together.

According to Figure 5, after three years, although evolved, there are many remaining features of LaCiip.

Research Question Two: In relation to the research-based framework for best practices and features of sustainability, how was collaboration sustained after initial intensive supports were removed? To address this research question, data were gathered from the fall semester of 1997 to the fall semester of 2000. Data sources included follow-up interviews, observations, and supporting documents (i.e., intern journal entries, analytic memos, district documents).

In analyzing the data key words that marked the content of the development of the project included: "still working together," "teaming," "on-going," "team teaching," and "supporting." The key words from the sustainability period of the project were reviewed and analyzed to identify major themes used to address Research Question Two. Table 11 (p. 126) provides a summary of LaCiip features and their sustainability answering Research Question 2.

During the 1997-1998 school year, major features of LaCiip that can be supported by the data were: (a) joint planning among Crista and Lena (lesson plans), (b) informal meetings (lesson plans and teacher journals), (c) evolving grouping practices for students (lesson plans), (d) district support (district document), (e) reallocation of resources (lesson plans), (f) role changes (lesson plans and follow-up interview), (g) increased communication (follow-up interview), and (h) additive and instrumental views of language and culture (all data sources). Thus, collaboration was sustained after initial intensive supports were removed because of the continual practices marked by these features that were present in the data.

Data analysis of information from the 1998-1999 school year found most of the features of LaCiip sustained. They were: (a) joint planning including interns (intern journals), (b) informal meetings (follow-up interviews), (c) evolving grouping practices for students (observations), (d) reallocation of resources (observations and follow-up interviews), (f) role changes (observations and follow-up interviews), (g) increased communication (observations and follow-up interviews), (h) university collaboration via interns (observations), and (i) additive and instrumental views of language and culture (all data sources).

According to the data, after initial supports were removed during the 1999-2000 academic year, the following collaborative features of LaCiip remained: (a) joint planning among Suki and Rochelle (follow-up interviews), (b) informal meetings among all members mostly during lunch (follow-up interviews and observations), (c) evolving grouping practices for students as a result of inclusion (follow-up interviews and

observations), (d) increased site administrator support due to increased demands of special education students and effectiveness of collaboration for bilingual special education team (follow-up interviews, observations, and district documents), (e) reallocation of resources (follow-up interviews), (f) role changes (follow-up interviews and observations), (g) increased communication (intern journals and observations), (h) university collaboration via interns (observations and intern journals), and (i) additive and instrumental views of language and culture (all data sources).

In responding to the research question, the data of the 2000-2001 school year reveals that by the continual practice of the following features by the professionals involved; (a) joint planning among teachers and interns in Suki's classroom (observations and follow-up interviews), (b) formal and informal meetings (intern journals), (c) evolving grouping practices for students due to inclusion needs (observations, follow-up interviews, and intern journals) (d) renewed site administrator support as evidenced by the hiring of Rochelle district documents, observations, and follow-up interviews), (e) reallocation of resources (observations), (f) role changes and redefinitions (observations and follow-up interviews), (g) increased communication (all data sources), (h) university collaboration via interns (intern journals and observations), (i) additive and instrumental views of language and culture(all data sources), and (j) the support of a larger educational community (follow-up interviews and district documents); the intervention is sustained.

Features that were sustained over the course of three years can be identified as Features of sustainability of LaCiip and compared to the literature on best practices of collaboration and sustainability for the discussion of the results in Chapter 5.

Themes that emerged during the data analysis from reading passages where key words were found addressing the sustainability of collaboration after initial intensive supports were removed, included teaching practices, teaming and intern learning. Most of these themes eventually led to teacher change, which will be further explored in the following chapter.

Research Question Three: How does sociocultural theory and more specifically Vygotsky's zone of proximal development (ZPD) inform collaboration ...(b)after initial intensive supports were removed? This question will be answered based on the use of the zone of proximal development (ZPD) rubric to evaluate key words from the data sources during the sustainability of the intervention.

To determine participant operation within the ZPD during this phase of the project, key words were evaluated using the ZPD rubric developed by the researcher for this study. Table 14 presents the rubric. At each level of the rubric evidence from the study that supports participant operation in the given level is included.

Table 14

Participant Operation in the ZPD During the Sustainability of the Intervention

Features of Operation within the ZPD
Level 1: Beginning operation within the ZPD Learners are dependent on others with more experience during routine interactions • Suki in her participation as an intern working with Lena and Crista • Rochelle in her participation as an intern working with Lena, Crista, and later Suki • All interns (e.g., Anna) working in the bilingual special education classroom Collaboration with more capable peers • Suki, Rochelle, and other interns as students at the university taking classes from Lena (also a student)
Level 2: Intermediate operation within the ZPD Activities that are intended to support intentional learning • Lena and Crista's acceptance of university interns • Paraprofessionals assuming teaching roles • Lena and Crista as disseminators of collaborative practices Interactive engagement among participants • Suki and Annette as cooperative teachers • Lena as participant researcher
Level 3: Advanced operation within the ZPD Contextual co-construction of knowledge among participants • Continual evolutionary co-planning • Suki and Rochelle's presentation as noted by intern's description Learners' reciprocal participation in a community of practice • Lena, Crista, and Annette's presentation at national conference • Lena's completion and presentation of dissertation
Level 4: Complete operation within the ZPD Internalization of the information/knowledge co-constructed manifested Changed or improved practice • Lena, Crista, and Annette's educational, and professional growth • Suki as a teacher and cooperating teacher • Annette as cooperating teacher • Institutionalized change in the hiring of Rochelle by the principal

On the first level of the ZPD rubric, Suki, Rochelle, and Anna showed their dependence on others with more experience during routine interactions by participating as interns who worked in the bilingual special education classroom. As well, Suki, Rochelle, and other interns as students at the university took classes from Lena (also a student) and Tim, manifested beginning operation in their ZPDs by the resulting collaboration with a more capable peer.

Level two on the ZPD rubric is intermediate operation within the ZPD. More specifically activities that were intended to support intentional learning were described by Lena and Crista's acceptance of university interns and the increased teaching opportunities for paraprofessionals throughout the three-year period. Bringing in learners who would be dependent on their knowledge and experience was a way in which Lena and Crista "passed the torch" or disseminated LaCiip to others. Suki and Annette's roles as cooperative teachers and Lena's role as participant researcher were indicative of interactive engagement among participants.

Participants advanced operation in the ZPD or Level Three can be noted by the contextual co-construction of knowledge among participants in the continual co-planning. This began with co-planning between Lena and Crista and later evolved into co-planning by Suki and the interns working in her classroom evidenced by Anna, an intern's journal entry describing teaming between Suki and Rochelle. Learner's reciprocal participation in a community of practice can be noted by Lena, Crista, and Annette's presentation at a scholarly conference as well as Lena's presentation and defense of her dissertation.

Complete operation within the ZPD or Level 4 of the rubric reflects internalization of information and/ or knowledge co-constructed or manifested resulting in changed or improved practice. For example, Lena, Crista, and Annette continued to operate in Level 4 after the initial supports for LaCiip were removed. They each continued to change or improve their teaching practice as a result of the internalization of the knowledge that they co-constructed jointly during LaCiip. Lena pursued her doctorate in bilingual special education, assumed a research agenda, taught university classes, and presently continues to support teachers at Los Alamitos in their efforts to create an effective bilingual special education program. Crista attained her Master's degree and now teaches ESL courses the community college level. Annette is now a leader as she continues to work within the LaCiip Project at Los Alamitos based on the principles she acquired during LaCiip. She supervises an intern in Suki's classroom and shares her classroom with both Rochelle and Beatrice. It was Annette who stated that she would not stop the collaboration process because she knew it was "good for kids." Operating in the ZPD in collaboration clearly transformed these teachers from the individuals they were three years ago to the educators they are today.

Suki also, showed characteristics of operating at this highest level on the rubric in her growth from intern to student to teacher to cooperating teacher. She brought to light the relevance of research-based methodology (OLE) as a factor for the sustainability of the collaboration. Anna, the intern who described Suki's classroom described Suki's internalization of all that she had learned as an intern, in regard to collaboration and

methodology, and as a result Suki's ultimate change. Annette similarly, by her participation as a cooperating teacher operated at level 4 in that regard.

Lastly, the institutional change signified by the site administrator's hiring of a bilingual inclusion specialist is indicative of the highest level of operation within the ZPD and changed or improved practice. The principal in this case who transformed from an indirectly supportive administrator to one directly supporting collaboration among the bilingual special educators (hiring Rochelle as the inclusion coordinator) showed changed and improved practice on her behalf.

Summary of Results

This chapter presented the story of LaCiip by describing it's development, implementation, and sustainability from the perspectives of the participants drawn from a variety of qualitative data sources (e.g., focus group interviews, observations, teacher lesson plans, follow-up interviews) in relation to the description's ability to answer the research questions.

Research Question 1, which addressed the manner in which collaboration functioned during the initial stages of the project, was answered by the identification of the following features of LaCiip found during the data analysis: joint planning, informal or formal meetings, evolving grouping practices, site administrator support, resource reallocation, role changes, increased communication, university collaboration, additive views of language and culture, and support of a larger educational community. Themes that emerged from passages surrounding key words that answered research question one were time for planning and learning among participants.

In answering Research Question 2, which focused on the sustainability of collaborative practices following the removal of initial supports, descriptions of the features of LaCiip were documented annually over a period of three years. Changes were noted in the evolution of each feature, which included the hiring of new personnel. Themes that generated themselves out of key words that answered this question were: teaching, teaming, and learning.

The first part (a) of Research Question 3 which addresses participant operation within the ZPD during Phase I of the study, found most participants operating in all four levels of operation within the ZPD. Supporting the themes generated, most of the ZPD activity was based learning among participants. Some activity was based on planning.

The second part (b) of Research Question 3, which focuses on participant operation within the ZPD during the sustainability of the study, also found most participants operating in all four levels of operation within the ZPD. As with ZPD activity for Question 3(a), activity supported the themes generated. In addition, participants appeared to begin at Level 1 on the rubric and progress through Level 4 over time. This point will be further developed in chapter 5.

CHAPTER 5

SUMMARY, DISCUSSION, AND IMPLICATIONS

This qualitative investigation analyzed the development, implementation, and sustainability of collaborative educational practices among special educators, general educators, and members of a university community. The study was conducted at an elementary school in the Southwestern United States over the course of spring of the 1996-1997 school year through fall of the 2000-2001 school year. It was based on literature drawn from collaboration in special education, sustainability of research-based practices in special education, and sociocultural theory as it relates to Vygotsky's zone of proximal development. The research questions within this study focused on gaining insight into the interactions that exist among the areas of collaboration in special education, sustainability in special education, and sociocultural theory. This final chapter contains: (a) a summary of the results from Chapter 4 and discussion of the findings as they relate to the literature on collaboration, sustainability, and the zone of proximal development (ZPD); (b) major themes from the findings; (c) implications for facilitating the sustainability of collaboration in special education; (d) educational implications of the intervention; (e) the implications for future research in the area, and (e) final conclusions drawn from this study.

Discussion of Results

Findings as they Relate to Special Education Literature on Collaboration, Sustainability, and the ZPD

In this section results from the study will be summarized and compared to the special education literature on collaboration, sustainability, and the zone of proximal development (ZPD). Results from Phase I of the study will be discussed in light of professional collaboration literature, results of Phase II as compared to the literature on sustainability, and results from both phases as related to the literature reviewed on the zone of proximal development.

Collaboration. To gain insight on how collaboration functioned during the time of initial intensive support in relation to the research-based features of collaboration, Phase I data were analyzed and compared to the features found in the collaboration literature in special education (Table 15).

Table 15

Features of Collaboration in Special Education and LaCiip

Features of Collaboration	Features of LaCiip
N/A	Resource reallocation
N/A	Evolving grouping practices
Open authentic communication	Informal and formal meetings
Teacher teams	Scaffolded participant interactions for LaCiip related activities
Administrative leadership and support	Site administrator support
Collaborative partnerships among schools and universities	Informal and formal university involvement Cathy and Tim
Consistent planning opportunities	Lena, Crista, and later LaCiip team, joint planning
Collaboration training opportunities	Flexible role transformations
Understandings of cultural diversity	Additive views of language and culture
Support of larger educational community	District approval ongoing with Principal support varying throughout study

When the features of LaCiip were compared to the features of collaboration drawn from the literature, there was strong evidence of specific collaborative practices during the implementation of the project. As can be noted in Table 15, the open authentic communication described in the literature (e.g., Audette & Algozzine; 1997;Coben et al., 1997; Cook & Friend, 2000), was comparable to the informal and formal meetings that were evident during the focus group interviews and co-planning by the participants of

LaCiip. Similarly, teacher teams described in the literature cited by such authors as Audette & Algozzine (1997), Coben et al. (1997), and Cook & Friend (2000), could be compared to the reported teaming and scaffolded participant-interactions used by LaCiip participants to coordinate schedules, services, and educational activities.

The initial support demonstrated by the principal was much like the administrative leadership described in the special education and collaboration literature (e.g., Kampwirth, 1999; Mastroprieri & Scruggs, 2000) in that it described administrators who supported teacher collaboration efforts by allotting time and resources for collaboration. Cathy and Tim's participation in LaCiip, as facilitators, functioned as a collaborative partnership between the school and university (e.g., Cook & Friend, 1991; Dettmer, et al., 1999; Englert & Tarrant, 1995). These relationships were described in the literature as critical for the "adoption" of research-based practices (Klinger, et al., 1999). Joint planning by Lena and Crista and later other LaCiip members (e.g., Suki and Rochelle) was like consistent planning opportunities described by Schumm & Vaughn (1991).

The time that Lena and Crista set aside for co-planning and the focus group interviews facilitated and supported ongoing dialogues among the participants in LaCiip. These activities were evidence of the training and supportive conditions found in the collaboration literature (e.g., Coben, et al., 1997; Dettmer, et al., 1999; Kampwirth, 1999). As a result of these conditions and training, the teachers "relinquished" their teaching "power" and empowered paraprofessionals opportunities to "stretch and grow," as well as Annette and Beatrice who functioned more as team members than speech and

learning disabilities specialists. Finally, the understandings of diversity described by Harris (1995; 1998), Salend et al.(1997a; 1997b), and Vaughn et al. (2000) are most like the additive views of language and culture assumed by the multidisciplinary polyglot representation of the members of the LaCiip team who worked collaboratively despite their own cultural and linguistic differences.

The support of a larger educational community (Salend, et al., 1997a; 1997b) was the only feature of collaboration not consistently found in LaCiip. During implementation, the fellow teachers were not supportive of the project, although there was support from the principal and the district directors of special education and bilingual education. Interview information collected from Rochelle during the sustainability phase indicated that this feature fluctuated greatly across the length of the study. At the end of the sustainability phase, Rochelle was hired as the inclusion specialist and the general education teachers at Los Alamitos "supported" her role in assisting learners with disabilities transition into their classrooms. The larger educational community continued to support the LaCiip over time and included administrators in the district including the director of special education and the director of bilingual education.

A feature of LaCiip that was not found in the collaboration literature was resource reallocation (i.e., paraprofessional support, equal division of students, specialists service in inclusionary setting). Similarly, evolving grouping practices, which related directly to serving the needs of the students affected, were not mentioned in the literature as these practices were specific to the LaCiip Project.

Sustainability. Data from follow-up interviews, observations, and supporting documents (e.g., analytic memos, district documents) were considered in determining how collaboration was sustained during Phase II after initial intensive supports were removed. Table 16 shows a comparison of the features of sustainability found in the literature compared to the features of LaCiip.

Table 16

Features of Sustainability in Special Education as Compared to Features of LaCiip

Features of Sustainability (Gersten et al., 2000)	Features of LaCiip
The reality principle	Reallocation of resources
Scope neither too broad nor too narrow	N/A
Linking changes to student learning	Evolving grouping practices
Built-in collegial support networks	Scaffolded participant Interactions
Collaborative endeavors, joint problem solving	University involvement
Opportunities for practice with feedback	Flexible role transformations
N/A	Meetings
N/A	Joint planning
N/A	Additive views of language And culture

Results from the data analysis revealed that collaboration in LaCiip was sustained after initial intensive supports were removed for five of six of the features of

sustainability found in the literature (Gersten, et al., 2000; Gersten & Vaughn, 1997). Over time participants in LaCiip practiced the reallocation of both material and human resources to optimize their teaching while better meeting the needs of their students. For example, Lena and Crista grouped students and divided the students in half so that each teacher would have an equal number of students, which resulted in reduced class size and a more manageable student teacher ratio. Another example was Suki's assignment of university interns to general education teachers who needed support while special education students were included in their classrooms. These reallocations of resources can be likened to the reality principle described in the sustainability literature, as they were in response to the "reality" of the needs of the teachers and students at the given time.

A feature of sustainability that did not appear in the features of LaCiip was related to scope. There was no discussion in the data analyzed that pointed to the scope of the project. This may have been because LaCiip was designed to meet a particular need; therefore the scope was predefined with parameters for including learners with special needs into general education classrooms.

Linking changes to student learning is related to the ongoing evolution of grouping practices in the bilingual special education classroom which began with Lena and Crista when they tried to find the best ratio of students with disabilities to students without disabilities, in each teacher's classroom to optimize student learning. Later, Suki practiced different grouping practices based upon the best combinations of students with disabilities to general education classrooms where they would be included based upon

general education classroom environment, temperaments of general and special education students, availability of university interns, and teaching styles of general education teachers.

Built-in collegial supports were marked by the scaffolded participant interactions that occurred during informal meetings before school, during lunchtime, and after school as well as relationships that were formed that link the university to the school. Some participants in the project moved into new roles with increased responsibility and collegial supports were fostered as their roles changed. For example, Rochelle began as an intern working with Lena and Crista. She later became a university intern working with Suki. Currently, Rochelle is the inclusion specialist at the school, jointly responsible for a new university intern working in Suki's classroom. As a result, Suki and Rochelle work together easily as a team. Because Annette has been providing speech and language services to students in the classroom since Lena and Crista co-taught, she has developed strong relationships with both teachers. Lena acting as university supervisor of one of the interns in Suki's classroom and another intern in the school, provides peripheral support. She considers herself a colleague and external support for all of the teachers involved.

These relationships have been important to the sustainability of the project because they have continually linked the university to the school over time whether the teachers were interns, college students, cooperating teachers, or as in the case of Lena, a university supervisor. Because of these links Tim, one of the university collaborators, has been indirectly involved in the sustainability of LaCiip as well. He has advised, taught, and supported all of the teachers in the project who have attained graduate

degrees in Bilingual Learning Disabilities and visits the school occasionally to note their progress. Klinger et al. (2000) describe a similar type of ongoing support and interactions among teachers and researchers as one key to the sustainability of curricular innovations in their study.

Additionally, Annette and Beatrice, original LaCiip participants are still at Los Alamitos in the same positions as at the onset of LaCiip, only now Annette leads the collaboration with bi-monthly meetings including all members of the bilingual special education team (including Beatrice, Suki, and Rochelle). She, as well as Suki and Rochelle who now have a new university intern, continue implementing and modeling the LaCiip collaboration that was launched by the LaCiip team during the spring of 1997. Consequently, all of the members of the original LaCiip team have become close friends who support each other personally and professionally.

Features of LaCiip that were not included in the features of sustainability framework were meetings and joint planning, as well as additive views of language and culture. Meetings and joint planning could be addressed in the built-in collegial supports and collaborative endeavors and problem solving of the Gersten et al. (2000) framework, but the omission of linguistic and cultural considerations in the framework are critical in light of the need for guidelines and principles that are applicable to diverse groups of practitioners who may work with increasingly diverse groups of learners (Artiles et al., 2000; Baca & Cervantes, 1998; Cole, 1996; Harris, 1998).

A question that might complement these factors and issues could be: "Were/are there sociocultural considerations for culturally and linguistically diverse communities of

learners (i.e., communication styles, culturally 'matched' innovations, coaching/modeling by culturally aware personnel) that may have/may enhanced the sustainability of research-based innovations?"

The Zone of Proximal Development (ZPD). Findings from Phases I and II of the study indicate that participants' operation in the ZPD occurred across both phases of the study. Based on excerpts coded and analyzed from the data, Table 17 illustrates participant operation within the four levels of the ZPD in relation to the development, implementation, and sustainability of LaCiip from the fall of 1996 to the fall of 2000.

Table 17

Individual Participant Operation within the Four Levels of the ZPD Over Time

ZPD Levels	F96	S97	F97	S98	F98	S99	F99	S00	F00
1 Beginning	Crista Lena	Anne.	Suki Roch.	Suki Roch.	Roch.				New Interns
2 Intermediate	Crista	Crista Lena Anne.	Suki	Roch.	Suki Roch			Roch.	
3 Advanced		Crista Lena Anne. Tim Cathy	Crista Lena Anne.			Suki Roch.		Suki Roch.	
4 Complete		Crista Lena Anne. Tim Cathy	Crista Lena Anne.	Anne.	Anne.	Anne.	Anne. Suki	Roch.	
5 Complete +				Crista Lena	Crista Lena	Crista Lena	Crista Lena Suki	Lena Suki Anne.	Lena Suki Anne. Roch.

Table 17 was developed by recording the levels of ZPD operation for each participant from the data analyzed. Participants' operation in the ZPD during the implementation (Table 12, p.128) and sustainability of the intervention (Table 14, p. 146) were used to construct this table. A new category (complete +) was added to the ZPD rubric that represents participants' transformation from a position of using support, to that of providing support to others. These transformations were usually facilitated by participant job or role changes at the school or within the context of the collaboration project that changed the participants' status from novice to expert. "Complete +" suggests participants' growth as a result of the support provided by the built-in support systems in LaCiip.

As indicated by Table 17, it is evident that participants in LaCiip functioned within their ZPDs throughout the project on a continuum. For those participants who were a part of the project for more than two years (e.g., Crista, Lena, Annette, Suki, Rochelle) growth can be observed as they moved through various levels of the ZPD rubric over time. For example, in the spring of 1997 Crista operated at the beginning level of the ZPD by having sought assistance from Lena and other participants in LaCiip. She moved through the intermediate, advanced, and complete levels during the fall of 1997 and spring of 1998 as she assumed a job-sharing position with Lena as a part-time bilingual special educator. During the fall of 1999 Crista (and Lena) acted as cooperating teachers for university interns. In this way, Crista transformed from one who relied on and used support from others to one who provided support for a pre-service teacher.

Over time Crista moved from beginning operation in the ZPD to complete + operation within the ZPD: a transformative level.

From the Table 17 it can also be noted that Suki moved from beginning operation in the ZPD as an intern in Lena and Crista's classroom during the fall of 1997, through the intermediate and advanced levels working collaboratively with the teachers. As the teacher of the bilingual special education classroom during the fall of 1999 Suki worked with Rochelle, her university intern. In this manner, Suki also transformed much like Crista, from one who used support (beginning ZPD operation), to one who provides support (complete + ZPD operation) for the new university intern working in her classroom. Both Crista and Suki transformed from novices to experts within the context of the study.

The members of the LaCiip team needed time, particular circumstances, and particular conditions in order to operate in the beginning stages of the ZPD and to move along the continuum fluidly to complete (changed or improved practice) or complete + operation (expert). These findings suggest that teachers need time to acquire new information that leads to change or improved practice and that with optimal conditions a cycle of improved practices can result in collaborative teaching communities with multiple levels of built-in support. Some examples of the particular circumstances needed by the teachers involved in this study were freedom from administration to collaborate, a constant influx of pre-service teachers from the university, and on-going support by participants who operated at increasingly higher levels of the ZPD. The results also indicate that operation within the zone of proximal development is desirable

and that in a supportive environment collaboration can facilitate participant operation within the ZPD.

Comments made by Lena, Crista, Annette, Suki, and Rochelle (participants who operated at all levels of the ZPD over time) reflected that for these participants "learning [was] a process of transforming participation in shared sociocultural endeavors" (Rogoff, 1994, p.210). These individuals grew over time within a supportive professional network as evidenced by their role transformations from using support to providing support over the course of the study. This phenomenon may not have been discovered without the application of sociocultural theory to the case study.

As described by Tharp (1997), the universal applications inherent to sociocultural theory deemed it an appropriate lens through which to view the participants' progress throughout the development, implementation, and sustainability of LaCiip. Application of the ZPD rubric made it possible and relevant to do so in order to determine ways in which this theory informed collaboration in this study. For example, scaffolding as conveyed by Vygotsky (1978) and Wells (1998) was described by name when Crista reflected on her expectations of LaCiip:

> ...eventually I will be watching Lena in action...and there will be a lot of scaffolding going on.

In this case Crista referred to the modeling provided by Lena that supported Crista's learning of particular teaching strategies or methods. Here she was clearly operating within her ZPD, which can be evidenced by her involvement in an "activity setting" (Rogoff, 1994) that required her to make challenging stretches in her development (Johnson Santamaría, et al., in press).

Additionally, focus group interviews during the implementation of LaCiip were found to be an effective means of eliciting data that captured sociocultural activity isolating instances where participants engaged in logical arguments, shared ideas, and worked together in the pursuit of common goals (Forman & McPhail, 1993). According to Table 17, participants operated at ZPD levels 2,3, and 4 during this period (spring 1997), with the most instances analyzed representing the third level of ZPD operation, which suggests the co-construction of knowledge and learners reciprocal participation in the learning community. It might be posited that the future sustainability of collaboration resulted from this preliminary sociocultural activity where trust and working collaborative routines were established (John-Steiner & Mahn, 1996).

Major Themes

Phase I. Major themes for this study emerged from passages where there was a high concentration of key words relevant to answering Research Question One. During Phase I of the study, key words pointed to teacher planning and participant learning as major themes. Planning emerged as a major theme from the discussions of increased planning by Lena, Cathy, and Tim to create and introduce the conditions for LaCiip, coupled with the increased instructional planning that occurred for each participant. Crista's April journal entry aptly expressed this theme:

> Planning for me has been extremely beneficial. Already, I have learned so much about how to manage my time each day just by having a well planned routine. Lena has shown me the value of scheduling time for planning. Before, I would put aside planning until the weekend and use specialist time or other free time to work on activities that now the paraprofessional who works with me takes care of. Planning time now consists of just that PLANNING, and what this has done is freed me from extra stress and pressures that I felt before in isolation. Going over ideas with Lena has helped me tremendously. I hope future teachers will have

> opportunities to choose "genuine" collaboration over struggling alone with a curriculum guide and a weekly planning notebook (how those days now seem so dark!)

Schumm and Vaughn (1991) also found the essence of this planning theme in their study. In their work on providing appropriate accommodations for mainstreamed learners with special needs in general education classrooms, they placed a strong emphasis on the collaborative nature of planning among general and special educators in meeting the needs of learners from both groups, that is both students in general and special education.

Another major theme that emerged was learning. Because the project was new to all participants, their learning curves increased substantially. Lena expressed her growth and learning in her January journal entry which portrayed her "feeling moved to be a person of action by pursuing doors that would help move [her] school district forward" in regard to improved practices in bilingual special education service delivery. In one journal entry she described herself as a person who "wants to keep reading and learning more." Crista also mentioned, "learning, stretching, and growing" multiple times in her written and verbal data samples.

Annette and Beatrice in their focus group interview responses (e.g., we are always learning more, this is causing us to grow) also revealed their acquisition of new knowledge by their participation in LaCiip. Paraprofessionals demonstrated their learning by the application of new teaching methods, while university collaborators employed "new" qualitative research methods. Special education researchers (i.e., Englert & Tarrant, 1995; Pugach & Johnson, 1995; Salend, et al., 1997) who have

investigated collaboration also report a substantial amount of participant learning from collaboration efforts such as LaCiip (Friend & Cook, 2000).

Phase II. Key words from the sustainability phase of the study pointed to the following themes: teacher teaming, teaching practices, and participant learning. These teaming configurations included job-sharing, co-planning, and team teaching.

Data sources indicated the primary vehicle for sustainability was the deliberate collaboration implemented initially in LaCiip and continued through teaming among the bilingual special educators and others. From the onset of the intervention and through the sustainability period, the bilingual special educator was a part of the teaching team or the active learning community that linked the school to the university. Lena and Crista began this built-in support system in their support of one another. In the first focus group interview Lena described Crista as "a talented first year teacher for who I have the very highest of expectations. I know I will enjoy collaborating with her." Crista expressed several times, "I am learning so much from the constant feedback that I am getting in this project." Later Suki maintained, "Teaming is like having a built-in support system." In addition, university interns have been a mainstay in the bilingual special education classroom since the fall of 1998. Their journal entries reflected the teaming that occurred between Annette, Beatrice, and the bilingual special educator. Gersten et al. (2000) include the importance of a "built-in support network" as well as "opportunities for practice and feedback," both features inherent to the intern-teacher-supervisor relationships that existed among the professionals in the bilingual special education classroom.

Key words were also found in excerpts related to instructional practices or teaching as a major theme in that the Optimal Learning Environment (OLE) training and curriculum was introduced to and practiced by Lena, Crista, Beatrice, and Annette. According to follow-up interviews, observations, and intern journals, OLE is still being implemented in the bilingual special education classroom. The university interns are assisting in the sustainability of this instructional practice, as they are required to take a bilingual methods class where the curriculum is taught and where Lena has served as the instructor. The classroom has been used as a model for students who want to see OLE applied. Suki, who was a student and intern under Lena's supervision, regularly employed this curriculum as evidenced by classroom observations and follow-up interviews. Rochelle, with a similar background to that of Suki, also sustained the curriculum. The 2/3rd grade bilingual special educator who is now a student at the university has taken the methods class and has also implemented the curriculum in her classroom, linking the instructional practice across four grade levels and to student learning (Gersten & Vaughn, 1997). This is evidenced by the completed OLE student progress checklists were a part of her university coursework.

Learning also emerged as a theme, but mostly from the perspective of novice teachers (Crista, Suki, and Rochelle) and interns over the course of the project. This learning could be considered collaborative in terms of joint problem solving, as the learners were consistently supported by more capable peers or university collaborators (Gersten, et al., 2000). Thus, teaming, consistent instructional practices (OLE), and

supported learning for new teachers were the major factors that sustained LaCiip after initial supports were removed.

Implications for Further Sustained Collaboration

The development, implementation, and sustainability of collaboration as described within this research study was an innovative intervention introduced and then sustained over a three-year period of time. Table 18 compares components of features of collaboration and sustainability to those found in LaCiip. From this comparison, three key components linking collaboration, sustainability, and LaCiip can be identified. These components relate directly to major themes derived from the data.

Table 18

Comparison of Features in Literature to Best Practices of LaCiip

Features of Collaboration	Features of Sustainability	Features of LaCiip
	The Reality Principle	Resource reallocation
	Scope neither too broad nor too narrow	
	Linking changes to student learning	Evolving grouping practices
Open authentic communication		Informal and/or formal meetings
Teacher teams	**Built in collegial support networks**	**Scaffolded participant interactions**
Administrative leadership and support		Intermittent site administrator support
Collaborative partnerships among schools and universities	**Collaborative endeavors and joint problem solving**	**Informal and formal university involvement**
Consistent planning Opportunities		Joint planning
Collaboration training opportunities	**Opportunities for practice with feedback**	**Role transformations**
Understandings of cultural Diversity		Additive views of language and culture
Support of larger educational community		Support of larger educational community

The first component was teacher teaming (Friend & Cook, 2000) via built-in collegial support networks (Gersten, et al., 2000), which gave rise to scaffolded participant interactions. The co-planning that Lena and Crista practiced which developed into teaming during their job-share arrangement increased their communication and provided a model for Suki and Rochelle. The former interns continue these practices with a new university intern this fall.

The second common component is collaborative partnerships among schools and universities (Englert & Tarrant, 1995) that lead to joint problem solving (Gersten & Vaughn, 1997) that may involve informal and formal university supports (Klinger, et al., 1999). Initially a collaborative partnership was developed between Lena and the university professors. They worked together developing and implementing LaCiip. Crista and Annette having attained graduate degrees at the university where the professors taught further strengthened the ties they had formed initially through LaCiip. These collaborative partnerships fostered learning, a major theme that emerged from data analyzed (Phase I).

According to Cathy, the members of LaCiip participated in "collaboration across communities." Crista, recognized the importance of this type of collaboration and described her perceptions of its importance in a focus group interview:

> I think it is so important that the university shows up. It's so incredible for me to be working with you (Cathy and Tim). I worked on a teacher research project with a university in California and the growth that I saw on the part of the teachers and how they began to see themselves as life-long-learners. Those teachers then talked about going back to school to get their master's because they said the university professors don't know what they are talking about. Not like the both of you who come and are in the classrooms as much as you are...

Crista elaborated on the importance of cross community collaborations that link universities and schools and that is strongly recommended by the collaboration literature (i.e., Englert & Tarrant, 1995; Salend, et al., 1997) and identified as an important component for sustainability (Gersten & Vaughn, 1997). Although university partnerships currently exist between collaborating teachers and interns, they remain and sustain collaborative features identified at the beginning of LaCiip.

The last key component is collaboration-training opportunities that include practice and feedback (Gersten, et al., 2000). These were initially demonstrated in LaCiip by the modeling and support that occurred in team teaching among certified and non-certified teachers. In addition, the relationships established as a result of LaCiip allowed university supervisors (e.g., Lena, Tim) opportunities to observe interns, model lessons or strategies, and provide specific guidance and feedback to interns in bilingual special education. Annette's experience at Las Alamitos, also afforded her opportunities to provide training sessions and mini-workshops to new teachers and interns. Within these many opportunities for practice and feedback, novice teachers and pre-service teachers were learning. This type of learning was identified as a major theme during Phase II of the study.

Further sustaining collaboration would involve the continuance of these three components, which were strongly supported by the major themes identified in the data analyzed for this study. These common components ironically captured the essence of prime conditions for participant operation within the zone of proximal development and linked collaboration, sustainability, and LaCiip. For instance, at level 3 of the ZPD

rubric, participants were involved in collaborative activities such as the co-construction of contextual knowledge (e.g., co-planning) and reciprocal participation in a community of learners (e.g., focus group interviews). In terms of sustainability, peer networks, coaching, and support were also collaborative activities that increased the likelihood of sustained collaboration. Some of the features for collaboration identified in the collaboration literature were found in both the sustainability literature and the literature reviewed on the zone of proximal development.

Harris (1995) described the importance of flexibility in the success of the bilingual special education teams she investigated. This flexibility applied to time/ scheduling, communication styles, culturally sensitive approaches, and inclusionary practices. Participants in LaCiip over time have been flexible in their multidisciplinary roles (e.g., bilingual special educator, speech therapist, university intern) and in the evolution of their collaborative teaching community in the bilingual special education classroom, as necessary to meet the needs of their students. Building upon the work of Harris (1995) and others (e.g., Artiles, et al., 2000; Bos & Fletcher, 1997) the consideration of sociocultural factors in special education research was a way in which to capture, address, and portray this type of flexibility.

Another important aspect that may have had implications for further sustained collaboration in efforts like LaCiip, was the way in which cultural and linguistic factors shaped learning and development and the impact that these factors had on collaboration throughout the project (John-Steiner-Mahn, 1996). The members of LaCiip who represented a polyglot group maintained additive views of language and culture from the

onset of the project and throughout the sustainability period. Spanish and English were used interchangeably (observations and focus group interviews), members of the team were multicultural, multiethnic, and multilingual (observations), and interdisciplinary to the extent they needed to be in meeting the needs of their students (observations).

In this study, the researcher also used the ZPD rubric. The rubric was developed from features of the ZPD found in the literature to propose an expanded view of the abstract notion of a zone of proximal development, making it identifiable, concrete, and thus more functional. Rueda, et al. (2000) similarly drew on a sociocultural framework to propose an expanded view of the least restrictive environments. The present study and Rueda et al. (2000) builds upon other studies by sociocultural researchers in special education (i.e., Artiles, et al., 2000; Bos & Fletcher, 1997; Rueda, et al., 2000), complementing what is known about diverse teachers and learners in special education contexts.

Educational Implications

The educational implications for inquiries such as this were positive for students, teachers, support staff, school districts, and university communities. Positive implications ranged from reduced class size to reallocation of district resources, to improved relations among university and school communities.

According to recent educational research, reduced class size, is beneficial to students as it reduces the student teacher ratio and increases opportunities for student learning. As well, student exposure to contextualized systematic explicit teaching methods and instruction via the OLE curriculum could also be considered positive and

substantial, particularly for second language learners (Ruiz, et al., 1996). According to its authors, conditions provided by OLE increase students' opportunities to work within their ZPD (Ruiz, et al., 1996).

In regard to affect and the socialization of children, students received opportunities to develop relationships with a more diverse population as a result of the inclusion effort (Mastroprieri & Scruggs, 2000, Vaughn, et al., 2000). This occurred both at the onset of the project with the model implemented by Lena and Crista, and went on throughout the project as Suki, and Rochelle continued to group students in heterogeneous groups for a variety of educational and social activities.

According to the findings from this study, special and general educators should be involved decision makers and supported by administrators when students with special needs are included into general education classrooms, otherwise inclusion efforts may be in vain (Harris, 1998). All educators affected need to be involved or students may suffer from the poor training, preparedness, and motivation of general education teachers who feel that the students with special needs are "dumped on them."

For general and special education teachers and support staff involved in projects such as this one, learning and knowledge of strategies and techniques can be shared (i.e., OLE) along with student accommodations that have been traditionally designated for special education population (Ruiz, et al.,1996). As a result of the continual cross training and shared knowledge, there can be increased opportunities for small group and one-to-one instruction of students when necessary. There are opportunities for personal and professional growth as a result of projects like this one because of occasions to

collaborate with professionals that are diverse in cultural and linguistic diversity as well as interdisciplinary skill. Finally, as shared by Lena and Crista and each university intern, participation in "teacher-researcher" projects in collaboration with university professionals encouraged life-long learning and long-term professional development in the field of education.

On the other hand, time constraints for appropriate planning, professional unwillingness to share expertise, and unsupportive administration can contribute to collaboration efforts that are ineffective and non-beneficial to teachers. These negative implications for collaborative efforts like LaCiip can be avoided with careful planning and the kind of collaboration models described by Friend and Cook (2000).

Additionally, this type of an effort can serve as a pilot for improving bilingual and special education programs. The success of such pilots can have regional or national implications. Refinement of such efforts can result in stronger bilingual education programs. Reallocation of resources as indicated in LaCiip could result in optimal use of district funds.

If districts do not support efforts such as these, the efforts are destined to fail before they are given a chance to reflect positive results (Audette & Algozzine, 1997). It is imperative that the support come from the top or teachers are vulnerable to attacks from others who are not involved, as in the example from the LaCiip effort.

Projects such as these provide opportunities for authentic classroom based research. These types of collaborative endeavors provide opportunities for university

personnel to collaborate with school professionals leading to more applicable research based practices (Englert & Tarrant, 1995; Klinger, et al., 1999).

Universities as institutions carry a lot of weight to professionals in the field of education. Either they are viewed positively as the site that granted them their license to teach, or negatively as the place that "houses professors who have been out of the classroom too long to know anything" (intern journal entry). The relationship between the university and school must be negotiated carefully in order to keep expectations and lines of communication open and clear.

Implications for Future Research

The present inquiry was conducted to describe the development, implementation, and sustainability of collaborative educational practices among special educators, general educators, and members of a university community over a period of three years using qualitative case study methodology. The promising results of this study suggest the need for continued research in this area. Future research efforts would be more meaningful if they were interdisciplinary involving "collaboration among communities" (Yonezawa, et al., 2000). Although it is not typical to write across areas such as collaboration, sustainability, and sociocultural theory, research findings from this study support interdisciplinary research endeavors.

The increased opportunities for collaboration delineated by IDEA 1997 were written for all learners with disabilities including the large number of over represented African American and Latino children receiving special education services to date (Artiles & Barreto, 1998). Collaboration studies like those of Salend (1997) and Harris

(1995), that are representative of individuals who are culturally and linguistically diverse, can inform researchers and practitioners alike and may be generalizable to larger segments of the population than studies conducted within homogenous populations.

As maintained by Artiles, et al. (2000), researchers need to employ qualitative methodologies, including case studies, in order to determine the intricacies involved in transformative collaborative efforts that are to be sustained over time. Multiple perspectives such as those gleaned from the participants and collaborators throughout the present collaborative effort investigated, expanded, and enriched the present literature base on collaboration and sustainability. Future research should include voices that represent similar polyglot groups.

Although the present study described specific ways in which teachers applied collaborative practices, the conditions that enhanced their long-term use of those practices, and the process and evolution of those practices over time (Vaughn, et al., 2000), future studies should more specifically address these important factors. Furthermore, additional studies that consider the effects of these practices on student learning would be valuable (Gersten, et al., 2000).

Finally, the participation and growth of novice teachers (e.g., Crista, Suki, Rochelle) in both bilingual and special education contexts need to be researched further. Information gleaned from studies such as these could inform the body of knowledge on novice teachers, mentoring, and teacher retention, all increasingly important topics for the future of education.

Although the present study presented favorable qualitative results, the sample size is small (N=8) and external validity is weak. Research conducted in the future should include a greater number of participants with complementary quantitative measures that study teacher change and student learning. Other possible limitations of the study that should be considered when interpreting the results are the difficulty in generalizing findings from one case to another (Merriam, 1998), the inherent limited objectivity of participant researchers (Biddle & Anderson, 1986), possibility of an oversimplified situation (Guba & Lincoln, 1981), and lack of rigor in research methodology (Hamel, 1993). One final limitation is the narrow focus of collaboration considered for this study. Although the focus of this study is professional collaboration, it does not does not include the perspective of parents and makes minor mention of administrators. These are both key players in any school-based collaborative effort.

Final Conclusions

In the present qualitative case study, analyses conducted in relation to the development, implementation, and sustainability of collaboration among bilingual special, general, and university educators, indicate favorable results in all areas explored. The results indicated that the most productive social context for teaching and learning among participants occurred when productive interactions in the bilingual special education classroom (a goal-directed activity setting), were jointly undertaken by teachers, university collaborators (experts), and interns (novices). Experts and novices made contributions and discoveries during both phases of the study (Gallimore & Tharp, 1990). This study, by integrating a sociocultural perspective, adds a critical dimension to

special education research. Adding this perspective to existing collaboration and sustainability frameworks may deem these practices more useful and applicable to a wider and perhaps more diverse population.

In this study, collaboration with other individuals within the ZPD, led to the development of culturally appropriate ways of doing things in the bilingual special education classroom (Trudge, 1990). Findings from the study indicated the importance of the role that collaboration played in addressing diversity-related issues in special education (Artiles, et al., 2000; Harris, 1998). Supporting the findings of O'Shea et al. (1999), the teachers in this study were cognizant of the unique challenges that were presented by the diversity (cultural, linguistic, ability) among themselves and their students and through collaboration were successful in meeting and overcoming those challenges. Furthermore, capturing the essence of the development, implementation, and sustainability for collaboration in meeting the needs of diverse learners in this study, informs the dearth of literature that addresses this topic (Englert & Tarrant, 1995).

This study provided detailed descriptions about the construction of collaborative communities that served learners with special needs (Englert & Tarrant, 1995; Harris, 1995; Salend, et al., 1997b) and revealing ways in which teachers applied research based practices (e.g. collaboration, sustainability), the conditions which enhanced their long-term use of those practices, and the process and evolution of these practices over time (Vaughn et al., 2000). The foundation provided by LaCiip in the spring of 1997, provided a scaffold supporting the sustainability of collaboration for the duration of the study.

Similarly, the zone of proximal development (ZPD) rubric developed by the researcher, was useful in identifying: first, whether participants were operating in the ZPD; second, to what degree they were operating; and third, what the conditions were that enabled them to operate in the most advanced levels of their ZPD. Identifying a continuum with specific levels of operation within the ZPD can be useful for future sustainability studies, indicating that teachers need time and supportive conditions to move through the levels of the ZPD before they are able to sustain research-based practices and move from one who is supported to one who can support others. These findings may be particularly applicable in novice teacher studies and teacher retention research.

Finally, and most importantly, this study supported the claim made by Friend and Cook (1991) in the early nineties "greater diversity among students coupled with dramatic increases of specialized knowledge in the disciplines will necessitate more collaboration and sharing of expertise among school professionals" (p.26). In this statement, the authors predicted the phenomenon captured by LaCiip and the sustainability of professional collaborative practices by others over three years, supported by all participants' operation in their own personal zones of proximal development to benefit culturally and linguistically diverse learners with special needs.

Crista ended her March reflection by capturing the final conclusion that represents what LaCiip was for those who were involved, bringing to light the mystery and essence of the sustainability effort:

> "Briefly I just want to say that I see growth in all of us (adults). We all have our own personalities and our own ways of BEING, but I believe that we do respect

our unique abilities and talents---even though at times we get frustrated with one another. We are all stretching our comfort zones to adjust to this project for the good of our students. We are learning how to be compatible and how to work in a collaborative setting. I never could have foreseen the small lumps that have popped up that we have had to smooth out together. However, with every smoothed out surface, we have been brought closer together and have been forced to look beyond our own perspectives in order to truly find the 'space' that will allow us to work FOR the 'bienestar' (well-being) of the children. THIS is the beauty. May we all appreciate the strengths that we each bring into this project that enrich our lives and the lives of our students."

APPENDIX A: FOCUS GROUP INTERVIEW QUESTIONS

PROJECT CIIP
COLLABORATIVE INTERDEPENDENT INSTRUCTIONAL PROJECT

FOCUS GROUP INTERVIEW

Introduction: The purpose of the interview is for us to learn more about Project CIIP: what are the goals, how you have designed the project, how you feel about it so far, what you see as strengths, and what you see as concerns. Having a group discussion is way that you can think together as you work together on this project.

This discussion should take about 1 hour. and I will have this discussion with you several times during the spring. It will help all of understand better how the project works. The information gathered from interviews like this will be summarized and shared with you and those interested in learning about the project. Unless you desire, names will not be identified.

We really appreciate your time and your thoughts.

Interview:

1. It will help us if you spend a few minutes telling us about Project CIIP.
   Probe:
   - -What are the goals?
   - -What kinds of students does it serve?
   - -How have you grouped the children?
   - -How does it work?
   - -What are the key features?
   - -How does the curriculum work?
   - -How does the different staff function in the project?

2. What do you hope to accomplish?

3. What do you hope to learn from this project?

4. What do you think the students will learn from this project?

5. What kinds of support have you received for implementing the project?
   - -staff development
   - -administrative
   - -teacher

6. You have been working with this project for a week. At the end of the first week, what do you see as some of the strengths?

   - -Students
     - -social
     - -academic
     - -first and second language development
   - -Teachers and support staff
   - -School/District

7. What do you see as some of the barriers or concerns for implementing this project?

   - -Students
     - -social
     - -academic
     - -first and second language development
   - -Teachers and support staff
   - -School/District

8. Think about how you plan your units/lessons before and after you began this project. Is this project affecting how you plan? If so, in what ways? Probe: before and now.

9. Think about the time the teachers and staff spend working together and learning from each other (collaborating). Is this project affecting this? If so, how? Probe: before and now

10. What do you think will be the key factors or strategies that will make this project work?
    Probe: Students
    Staff
    Administrative support
    Curriculum

APPENDIX B: EXCERPT OF FOLLOW-UP INTERVIEW TRANSCRIPT

R: Explain how this study can be of use to other teachers with similar populations.

C: From my perspective, the actual blending of two classrooms is great idea if that means teachers co-planning and sharing ideas to improve student achievement. The fact that I was a first year teacher comes to mind over and over again though, and I think the mentor aspect of the project really helped me in my own professional growth. I think all cross categorical classrooms should reverse mainstream rather than send their children out to other classrooms where they may not receive the kind of support they really need.

R: Have you grown professionally as result of this study? If yes, why?

C: All of the people involved grew. The paraprofessionals grew as much as any of us. You had to even stretch in order to help me, remember? I grew a lot as result of the project. Look at me now... the project, along with the relationships and support enabled me to become a special educator myself. I now know a lot more about collaboration and the importance of teaming up with someone with more experience or even a different viewpoint than my own.

R: Would you recommend a project of this type for other teachers to try?

C: Definitely. I believe that any new teacher who is overwhelmed and feeling unsupported could benefit from a project like this.

R: Do you think that this project served it's original purpose?

APPENDIX C: ORIGINAL LACIIP PROPOSAL

Collaborative Interdependent Instructional Project (CIIP):
Developing a Team Approach to Teaching Exceptional Bilingual Students While Improving the Quality of Existing Bilingual Education Programs

Proposed by
B.A., bilingual self-contained cross categorical Kinder-1st grade
B.A., bilingual 1st grade
Los Elementary School
Ph.D., Department of Special Education and Rehabilitation
University of Arizona

Rationale:

- Lack of bilingual special education personnel to serve the needs of identified and unidentified bilingual students in District.
- Inadequacy of knowledge of multi-level student accommodations, strategies, and modifications in first year bilingual education teachers (including ESL and SSL).
- Need for professional collaborative opportunities among special and regular education educators and the University to reduce stigma associated with special education.
- Increase knowledge base of both regular and special education teachers.
- Inequitable allocation of resources in bilingual education.

Theoretical Background:

- Based on Sociocultural and constructivistic educational theories including the research of Ruiz, García, & Figueroa(1996), Bos & Fletcher(1996), Mattes & Omark (1991), Torres-Guzmán & Pérez (1992) and Poplin (1988).
- Vygotsky's Zone of Proximal Development including scaffolded learning and professional development.
- Krashen's input + 1 comprehensible input theory.
- Gardner's Multiple Intelligences

Goals:

- Provide higher quality of education for all bilingual students by providing accommodations that would enable each child to succeed at their instructional levels and beyond with optimal classroom support.
- Establish and maintain opportunities for collaboration, cross-training, and mutual support among special and regular education teachers and support staff.

Objectives:

- Reduce student teacher ratio in district bilingual education programs overall.

- Increase knowledge base and success rate of bilingual teachers and their students by working in accordance with district curriculum goals and standards.
- Enhance district policy on bilingual education by providing a systematic plan for incorporating contextualized content oriented English as a Second Language.
- Strengthen both regular and special education bilingual programs through innovative, systematic, research based educational models and developmentally appropriate instructional practices.
- Enhance development of extended programs, projects, and research in bilingual education through the reallocation of resources.

Participants:

- Bilingual Special Educator and Project Coordinator
- Bilingual Educator and Project Coordinator
- Bilingual Special Education Instructional Assistant
- Bilingual Instructional Assistant
- Speech and Language Teacher
- Bilingual Special Education Resource Teacher
- Special Education Community Volunteer
- Special Education Professor University of Arizona

Strategies for Project implementation:

Prior to starting the project, overview and expectations will be discussed with participants. Baseline data will be collected from students using three procedures: (a) standardized assessments, (b) non-standardized instruments, and (c) natural communication samples. In addition, attitude surveys will be completed by all adult participants in the project.

1. Create regularly scheduled opportunities for project teachers and staff to plan, share techniques and strategies (including team teaching when appropriate), observe one another and maintain accountability to Principal and district.
2. Mainstream Kindergarten bilingual special education students in regular bilingual Kindergarten classrooms for first half of day.
3. Combine numbers of remaining first grade students in both classrooms.
4. Identify those students who need optimal support and accommodations to be instructed by special education teacher until regular education teacher is ready to implement strategies.
5. Divide total number in half with each teacher receiving an equal number of students.
6. Divide support staff and resources according to the needs of the students.
7. Both teachers instruct using parallel goals, accommodating each student accordingly.

8. Both teachers monitor student progress, adjust as necessary in an ongoing collaborative communicative process to further meet the needs of students being served .

Ongoing activities:

- Teacher-train-teacher model for staff development for all staff involved.
- Informal student assessment using Project Olé matrices and portfolios.
- Project video documentation.
- Monthly self and group evaluations completed by all staff involved, including University feedback and support.
- Observations by University collaborators.

As the project comes to an end, post data will be collected, analyzed, and presented in a report format.

Project Benefits to Students:

- Reduced class size thus increased opportunity for learning.
- Exposure to contextualized systematic explicit teaching methods and instruction via Specially Developed Academic Instruction in English (SDAIE).
- Opportunities to develop friendships with a more diverse population.
- Reverse mainstreaming will reduce label stigma.
- Increased likelihood for students to stretch and work in the Zone of Proximal Development .
- Multiple talents realized through exposure to heterogeneous group.
- Exposure to wide variety of teaching styles.

Benefits to Teachers and Support Staff:

- Learning and sharing Knowledge of strategies, techniques and accommodations traditionally designated for special education.
- Increased opportunity for small group and one-on-one instruction.
- Opportunity for personal and professional growth.
- Collaboration and experience with diverse group of professionals.
- Participation in "teacher as researcher" projects in collaboration with University staff to encourage ongoing life-long learning and professional development in the field of education.

Benefits to the District:

- Project can serve as a pilot program for improving district Bilingual and Special Education Programs with Regional and/or National implications.
- Prospective stronger Bilingual Education program.
- Reallocation of limited resources will result in optimal use of district funding.

Benefits to the University of Arizona:

- Authentic classroom based research.
- Opportunities to collaborate with classroom teachers and support personnel.

APPENDIX D: SAMPLE JOURNAL ENTRY

Drs. to help me with this, but I don't think they have the time. I realize that I should have discussed the project with them at length before the proposal was developed, but again, time became an issue. I wonder how they feel about the way I literally thrust them into the thick of things? I am afraid to ask because I don't know if I really want to hear the answer.

The teachers at our school are becoming suspicious of the project. I believe it is because they feel threatened. I also think that they believe that by doing the project, and I are somehow saying that the job that they are doing is somehow inadequate, and we are not. Their concerns come in may flavors: We are afraid for the children. Do the parents want their children in Special Education classes? Latino children need stable environments. What about the Kindergartners? How will this project affect us? etc.... We had a meeting that Albert arbitrated. He supported Cristina and I and the project and to me, that was that.

In retrospect, I believe that the opposition brought the project participants closer and increased their commitment to the project.

The first meeting of most participants including University support was very successful. The vibe was positive despite the previously mentioned set back. I feel that as long as we can meet on a regular basis to put the pieces back together, the project will go on as planned. Candy has proposed many different measures for baseline data collection. I see her as the research expert here and will do all that I can to gather the data. With planning and teaching, and training; I know this will be difficult.

February 7th

and I are planning well together. We are able to bounce ideas off of one another very naturally. The planning time that we have each Monday and Tuesday from 9-9:50 is great because we are able to start the week off firming up our lesson plans written the previous week.

I have been spending a good portion of my time testing students with the Language Survey, and though and are working on sending me , I will continue to do what I can. also has committed to helping me test, as has . I plan to train and with the social measures so we will have all data collected by month end.

never showed, and said that she would be available next week sometime. I will continue to anticipate testing myself.

Informal writing samples have been collected.

dropped by for an informal meeting about the project. We discussed how things were going and she seemed pleased. She asked us how we planned to integrate Olé into the project, and we shared with her that we already had. She was delighted.

I think that Sue sees this project as something huge for our district. I shared with her that there were other teachers interested in the project as well. I can tell she supports us and

looks forward to the hard data that will come from this effort.

February 15th

Olé was tremendous. The presenters, were excellent motivaters and presenters. It was also nice to see again. They made me want to abandon my districts staunch curriculum and do strictly student centered work all of the time. I again feel blessed because I am familiar with OLé and know ways in which I can integrate their strategies into our existing curriculum. I look forward to becoming an Olé teacher trainer so that I can train our district employees. I feel that since was there, that is the true immediate direction in which we are headed.

On a different note, we had a challenging week with We appreciate her assistance in the testing of our students, but we have enough strong personalities on this project. As it turns out, she made feel uncomfortable by questioning her credentials and involvement in the project at the Olé Training. She was a bit intrusive while testing the students, but doesn't really bother me. The passing out of her business cards and questioning me about speech opportunities in our district though, did rub me the wrong way. I recommended that she take up these questions with

February 20

Rodeo break is here and boy am I glad for a break! Post Olé lesson planning resulted in our changing our lesson plans completely. We have included all but one of the Olé strategies for lesson plans this week. will be observing for every Friday morning and I can't wait to incorporate her into the project.

I feel a bit scattered and overwhelmed with all of the data that we are collection on the project. As of today we have all language surveys in Spanish

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