TEACHING AS CARING RELATIONS: A CASE STUDY OF AN EXEMPLARY

SECONDARY SPECIAL EDUCATION TEACHER

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Submitted to the faculty of the University Graduate School in
partial fulfillment of the requirements
for the degree
Doctor of Philosophy
in the School of Education
Indiana University

December 2004

Accepted by the graduate Faculty, Indiana University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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October 22, 2004

Dedication

To the memory of my mother, Norma Joy Butler, whose

love was taken from me.

To the memory of my aunt, Montana Ridge-Washburn,

whose love I can still feel.

To my aunt and adoptive mother, Ora Holt, whose
love and support continues.

ACKNOWLEDGEMENTS

This dissertation has been years in the making. Along the way, I have received wonderful support, encouragement, and care from many friends and colleagues. The number of people that deserve acknowledgement is proportional to the time required for me to culminate my doctoral studies.

First, I would like to thank Tom Gregory, Myrtle Scott, Sandi Cole, Sam Guskin and Ellen Brantlinger for serving on my committee. Each demonstrated extreme patience and offered sound advice. My early coursework with Myrtle inspired me to think broadly about context and encouraged me to consider a qualitative design. Many conversations with Tom helped me to better understand the importance of strong learning communities. Sam and Ellen co-chaired the committee and provided strong guidance, particularly with the design. Ellen also directed my dissertation. Her patience, support, encouragement, suggestions, and frequent reads, particularly as I struggled with the writing, were limitless. Her vast knowledge of relevant literature and qualitative inquiry was incredibly helpful and I enjoyed the many conversations we had exploring the significance of relationships in education. In the end, it was Ellen whose decision to retire and take temporary residence in Afghanistan prompted my final sprint for the finish line. I cannot thank her enough for her perseverance and consistent support.

In the early years of my doctoral program, Melody Shank and Karen Grady offered wonderful friendship and collegiality, as we completed projects together and spent long hours discussing theory, teacher education, and the state of our nation's schools. Both have provided inspiration through their own scholarship and teaching. Karen also offered feedback on several chapters and I have always appreciated her critical and helpful feedback. Thank you Karen and Melody.

ABSTRACT

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TEACHING AS CARING RELATIONS: A CASE STUDY OF AN EXEMPLARY

SECONDARY SPECIAL EDUCATION TEACHER

This interpretive case study examines the teaching practices and thoughts of a

secondary special educator considered by many (teachers, administrators, students,

university faculty, pre-service teachers) to be an exemplary teacher. During two years,

the researcher spent an average of two days per week observing the public high school

teacher, his students, and co-teaching partners in several general education math classes

that included students with disabilities. During the second year of the study, the

researcher also observed and worked with the teacher and his students in a Resource

Class. The data included field notes, taped interviews, student course evaluations,

teaching materials, and other artifacts.

The original research questions focused on instructional practices, co-teaching,

student perceptions, teacher caring and relationships, and the development of community.

The researcher systematically categorized multiple data types and sources to arrive at her

categories and conclusions.

The study's findings show that caring teaching and pedagogical mastery are

interdependent and that students perceive teacher competence at promoting students'

academic engagement and success as demonstrable proof of caring teaching. The study

also determines that this exemplary teacher perceived his role to extend beyond the

teaching of subject matter content, that he felt obligated to promote the development of

caring and responsible students who were knowledgeable about interpersonal

relationships and dimensions of the self. By portraying a strong moral authority,

displaying high levels of enthusiasm for teaching, students, and subject matter, forming

close, caring, personal relationships with students, and consistently modeling expected

behaviors, the teacher created a classroom climate that supported student engagement,

effort, and success with academic and behavioral expectations. Finally, the findings show

many benefits of the co-teaching model, and that students and teachers preferred co-

teaching over solo-teaching.

The study aims to provide substantive content to the discussion of how best to

engage low-achieving students, including students with disabilities, at the secondary

level. Implications for teacher practice and teacher education are discussed.

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INTRODUCTION: DISCOVERING AN EXEMPLARY TEACHER

This dissertation study evolved from my intrinsic fascination with an outstanding teacher I observed coincidentally as I supervised student teachers and field-experience students in his classrooms. Although I considered various other possibilities of dissertations, I kept returning to my interest in grasping why I, and so many others, were intrigued with this teacher's success with students. Eventually, I decided to follow my interests and study Alex Morse.[1]

Finding Alex Morse

I first met Alex Morse in the fall of 1994. Having just started my doctoral program, I was employed as a supervisor of field placements for university students enrolled in the pre-service teacher education program. My work mainly consisted of visiting various schools and observing the pre-service teachers as they worked with students in a variety of classroom contexts. I typically wrote one page of observation notes and shared these with the university students in conversation. Additionally, I met individually with the cooperating teachers, attempting to more fully understand their perspectives regarding the pre-service teacher's work. Having taught in some capacity for a good part of 12 years, I regard this experience as a supervisor as the best professional development experience of my educational career. No other activities have been so powerful. Sitting in over 60 different classrooms, free of any instructional responsibility for the large groups of students, I was able to experience students' perspectives while simultaneously attending to the actions of the beginning teachers. Analyzing the novice teacher's pedagogical moves and discussing issues of instruction and curriculum with

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[1] A pseudonym, as are all other names used (for people and places) in this study.

them and cooperating teachers, I was developing skills of reflection that immediately began to serve me well as I taught my own courses at the university.

There are two things that I distinctly remember thinking during my first visit to Eleanor Roosevelt High School (the site for this dissertation research). One was that the teachers (Alex Morse especially) appeared very competent and seemed to genuinely enjoy their work. The second was that the three special education resource rooms that I visited were not clustered together, but were spread throughout the school, a novel arrangement that was definitely not the norm in most other high schools that I visited. Alex's resource room was located in the math wing. Marianne Lash's resource room was in the business/computer wing, and Gerald Crow's resource room was in the social studies wing.

The Attraction of Alex

Although I had gone to Alex's resource room to observe the pre-service student assigned to Alex, I struggled to direct my attention to her. Having worked in a similar setting just one year prior, I immediately noticed a resource room where students were engaged with their work, and a teacher who was actively engaged with them. Alex demonstrated patience and kindness, yet enthusiastically pushed the students to put forth their best efforts on various tasks. The students, Alex, and the instructional assistant worked on a variety of tasks with purpose and efficiency. There was little sense of the drudgery I had experienced in my own resource room. Students and teachers seemed to genuinely enjoy this time. Sitting in a chair with wheels, Alex spent much of the time near the middle of a long table working with students on either side and across from him at the table. He would frequently scoot around the room to work with students sitting at

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carrels and desks throughout the room. For much of this first 30-minute observation, Alex worked most closely with Kara, a quiet and neatly dressed young woman whom I judged to be a junior or senior. Alex assisted Kara with the dreaded vocabulary worksheet that she had brought from her social studies class to the resource room. The worksheet served to force Alex and Kara's attention to the routine activity of looking up definitions.

I suspect that hundreds of thousands of high school students regularly complete these daily or weekly worksheets, most often independently, either in the classroom or at home (or in a car.) Kara had in front of her a list of the vocabulary words, evenly spaced on a worksheet with plenty of blank space to the right for the definitions to be copied from the glossary at the back of the textbook. This is the way I remember being taught to complete vocabulary work and how I have seen most students proceed. In this way, many students, (whether in study hall, a general education classroom, a resource room, at the kitchen table, or in the car) can work without the assistance of another; just match the word on the paper to the word in the glossary or dictionary and copy all the words that follow the entry. No assistance required. Perhaps it is this routine and predictable nature of the task that makes the activity so attractive to many teachers (and maybe to some students). Nevertheless, in spite of their contentment, it is important for educators to ask: Are students learning new meaning, recalling what they already know but using slightly different terms, or simply trying to create a study sheet from which they will engage in a rote learning task? Most likely, different students are doing different things. Despite these different outcomes, it is unlikely that many low-achieving students actively engage mentally in tasks of copying words they often do not recognize or sentences they do not

comprehend. Perhaps as a result of questioning the pedagogy of vocabulary tasks, Alex actively interacted with Kara around the vocabulary, clearly not expecting or wanting her to work in isolation.

Instead of encouraging or expecting Kara to look up each vocabulary word in the back of the book, Alex asked Kara to say each word and then look for the word in the chapter text by skimming through the reading. (The vocabulary words appeared in bold in the text and were listed on the worksheet in order of their appearance in the text.) Once she found each word, she or Alex or both read the sentence in which the word was found. Sometimes they also read surrounding sentences. Following this reading, Alex asked Kara what she thought a particular word meant and Kara usually offered an adequate approximation of the meaning of the word. Often Alex used various cue systems to help Kara with word identification and comprehension. Alex and Kara (and often others) then talked about the ideas contained in the text. Alex occasionally referred Kara to the glossary to assess whether she understood the meaning of the word given the definition that appeared there.

From time to time, Alex pulled or pushed himself to another spot at the table or wheeled around to an open space so that he could make eye contact as he addressed the students working in the carrels. He was involved with each of the students and their work, even the sullen young man that Jennifer (the pre-service teacher whom I was there to observe) was trying to help write a book report.

As one might imagine, I had little to write or to say to Jennifer regarding her work with one of the students at the table. I had been mesmerized by Alex's work with the students, especially with Kara. I wrote a note to the field experience student that said,

"Watch this teacher very carefully. Take in everything." I had also hand-recorded very detailed notes[2] to share with her that described Alex's strategy for assisting Kara with the vocabulary. After describing his strategy to Jennifer, I asked that she think about how that differed from what typically happened with vocabulary lessons. After all, one of the main objectives of field experience was to expose students to good models and to help them understand what they were observing in these models.

During the remainder of that semester, into the next, and over the next five academic years, I returned to Alex's classrooms again and again. Supervising a student teacher in the very next semester, I had the opportunity to visit Alex in the math classrooms where he spent— and continues to spend most of his teaching day— co-teaching with two of his math colleagues. In 1990, Roosevelt High had restructured to include students with disabilities in general education courses and the faculty had decided to adopt a co-teaching model of support in certain content areas. When I first visited the school in the spring of 1995, Alex and Ted Kirchen were co-teaching Tech Prep Algebra and Alex and Rick Weir were co-teaching Tech Prep Pre-Algebra. Alex and Ted began their teaching partnership in 1990 and it continued throughout this dissertation research. Alex and Rick had just begun teaching together after Alex's previous partner had moved to another school. Visiting these classrooms was even more delightful to me than seeing Alex in the resource room. The pre-service teachers working in these classrooms excitedly reported how much they were learning, how "awesome" Alex was in all the different settings. Most of these students had never seen two teachers share instructional responsibilities in the same classroom and they reported to me that they were extremely

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[2] These notes were used to describe Alex's instructional strategy detailed in the preceding paragraphs.

impressed with its power. At the university, I asked some of the faculty about Alex's

teaching and work with pre-service teachers. Everyone praised his work, his ability to

connect to students, to motivate even the most disengaged students, to support students

who struggled academically and socially, to collaborate with and mentor the pre-service

teachers. He was considered by the teacher education faculty to be one of the great

models and he was consequently assigned many interns. During my frequent visits to the

school, I knew that I was seeing a very competent and passionate teacher, that the

collaborative teaching was incredibly powerful, and that I very much wanted to learn

more. I remind the reader that I was at the school to observe and provide feedback to the

university students. Seeing Alex and his teaching partners only during my supervision

visits provided insufficient opportunity to fully understand the complexities and

intricacies of Alex's work, something that I felt was more than worthy of deliberate

study.

This is how I came to this study. Enormously impressed with what I had seen of

Alex's work and his reputation as an exemplary teacher, I wanted to more fully

understand what it was that made him so good and how an esteemed teacher viewed the

work of teaching. The collaborative teaching arrangements and the inclusion of students

with disabilities in general education math courses added to my interest. A broad question

guided my initial inquiry: What contributes to Alex's exemplary teaching as he works in

both solo and collaborative teaching arrangements?

In summary, this introduction has briefed the reader to my initial interest in a

particular teacher's work and the broad research question. In the chapters that follow, I

present Alex's story, constructed through careful analysis of observation and interview

data and informed by relevant literature. The purpose and background for the study will be presented in Chapter 1. Chapter 2 will describe the methods. In Chapter 3, I introduce the participants and describe the setting. In Chapters 4, 5 and 6, I address the themes that I came to understand as central to Alex's work. Finally, in Chapter 7, I summarize what I learned from the research, discuss limitations, and pose potential implications for teaching and teacher education.

Chapter 1

CONTEXTS, PURPOSE, AND BACKGROUND

Contexts and Considerations

Educational scholars within the field of special education have spent the better

part of the 1990s debating the merits of inclusion versus those of separate educational

placement for students with disabilities. Though not well defined, inclusion generally

refers to a merger of general and special education, a systemic structure in which students

with disabilities are members of general education classes and receive access to the

general education curriculum and instruction alongside students that have not been

identified for special education services. Educational scholars have effectively argued

that while placement in general education classrooms is a necessary condition for

inclusion, it is not sufficient. Inclusion is not simply about placing students with

disabilities in general educational classrooms. Inclusion is primarily about providing

effective supportive practices within the general education environment, practices and

structures that create and maintain an academic and social environment in which students

with and without disabilities have access to a general education curriculum and can

participate and achieve success alongside their general education peers (Lipsky &

Gartner, 1997).

Improving Special Education by Reforming General Education

For many possible reasons, inclusive programs have developed slowly at the

secondary level. Educational researchers have identified potential barriers to inclusive

program development at the secondary level (e.g., Cole & McLeskey, 1997). These same

obstructions can also be described as potential barriers to developing and maintaining

responsive instructional practices for educating all students at the secondary level. Findings from empirical studies that investigate academic outcomes for students with disabilities in inclusive schooling are mixed, though the research tends to find inclusive settings favorable with regards to academic progress for students with and without disabilities (Logan, Bakeman, & Keefe, 1997; McDonnell, Thorson, Mcquivey, & Kiefer-O'donnell, 1997; Salend & Duhaney, 1999; Waldron, Cole, & Massoumeh, 2004).

Many studies have investigated the social implications of inclusive education. Generally, studies have indicated that students with disabilities made great gains in developing increased social competence and independence (Peck, Donaldson, & Pezzoli, 1990). At the same time, students without disabilities have been found to become more understanding and accepting of differences following an experience of school inclusion (Corbin, 1991). Other studies have investigated the school structures and instructional practices associated with inclusive education (Burke, Hagan, & Grossen, 1998; Hewitt, 1999; O'Shea, 1999). However, the number of studies exploring inclusion at the secondary level is very small indeed. In particular, we know very little about co-teaching partnerships at the secondary level or about how responsive instructional practices can be implemented and sustained within secondary classrooms that include students with diverse ability levels, special education status aside. Additionally, there exists little information concerning teachers' or students' experiences with co-teaching that might provide models to teachers trying to support the inclusion of students with disabilities at the high school level (Weller, 2002). Along these lines, there are few studies that focus on the exemplary practice of a secondary special educator who teaches in a variety of settings associated with special education.

The Need to Belong: Creating Climates of Care

There is ample evidence that suggests that today's young people feel alienated, and are in great need of adult attention, guidance and support. School reform literature is replete with suggestions to make schools safe, caring places where all students feel they belong, are connected to adults and other students, and experience academic and social success (Elias et al., 1997). Low-achieving students and students with disabilities that experience school failure face dismal employment outcomes (Wagner, 1989). Schools stand accused of lacking the flexibility to accommodate diverse abilities and interests of an increasingly heterogeneous student body. Students are not leaving school ready to become responsible and engaged citizens, because schools do not adequately address preparation for the world of work, parenting, civil responsibility, or the development of relationship skills (Brock, 1988). Yet, current reform efforts focus exclusively on setting strict accountability measures that narrowly define student growth solely in terms of academic achievement. Schools face tremendous challenges in figuring out how to address the social, emotional, and academic needs of young people when high-stakes testing places inordinate attention on a few academic areas.

<div align="center">Purpose of the Study</div>

I carried out this study to tell the story of a teacher. In order to tell an accurate story, I set out to give voice to Alex, his students, his teaching partners, and to provide deep description of his classroom practices with several groups of low-achieving high school students, including students identified for special education. I selected Alex and his classrooms for study because of his acknowledged effectiveness and hypothesized

that careful, deliberate consideration of his work could reveal facets of teaching practices that would inform current efforts to re-structure special education services, particularly at the secondary level. More specifically, I hypothesized that studying a teacher considered exemplary would uncover teaching practices that could be considered a "best practice" model for teaching high school students who struggled with school and were assigned to the lowest tracks.

This dissertation research has emerged as a mixture of story, theory, and implication, which I hope will provide intricate, valuable content for substantive discussions of teaching and learning among teachers, researchers, and teacher educators. I hope that teachers will be engaged by this contextualized investigation of Alex's work. It is my hope that teachers will see elements of their own practices in Alex and that my explication of Alex's knowledge, skills, and attitudes might clarify the thoughts and the actions that they take with their students. Alex's teaching dilemmas in the co-taught and solo classrooms are particularly his own, but the problem of meeting the needs of struggling students is one familiar to many teachers. As Alex successfully re-engaged students who had experienced episodes of school failure, his story prompts questions of whether his practices and attitudes can inform general and special education teachers as they teach alone or together.

<div align="center">Background for the Study</div>

Barriers to Inclusion at the Secondary Level

Cole and McLeskey (1997) implicate several barriers contributing to the delayed development of inclusive secondary programs as compared to inclusive elementary programs. These barriers likely contribute to the perceived resistance toward responsive

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instructional practices on the part of educators in the secondary school. Specifically they list the following:

1. Secondary school organization generally requires that teachers specialize and focus on complex curricular material, whereas elementary educators are expected to teach basic academic and social skills.

2. The difference between coursework demands and student skill level is greater at the secondary level. Secondary students identified for special education services generally lack basic skills as well as study skills necessary for success (Zigmond, cited in Cole & McLeskey, 1997).

3. The range of curricular content is broader at the secondary level. Secondary schools are charged with offering traditional curricular content not only for a variety of skill levels, but they must also offer instruction related to living skills, vocations, and transitions.

4. In general, secondary classrooms rely on teacher-centered, didactic instruction to whole classrooms, and teachers rarely arrange for differentiation. As a result, secondary educators spend most of their time with large groups of students, and relatively little time with individual students (Deschler & Schumaker, cited in Cole & McLeskey, 1997).

5. General educators at the secondary level tend to be content specialists, many with little training or motivation to adapt curriculum and instruction. (Smith, Polloway, Patton & Dowdy, cited in Cole & McLeskey, 1997).

6. Transition through adolescence affects emotional, social, sexual, physical and academic development of high school students (Mercer & Mercer cited Cole &

McLeskey, 1997). Thus, one can expect secondary students to struggle with strong motivation and interest toward academic achievement.

Additionally, secondary schools are under considerable pressure from outside agencies. Accountability demands on secondary schools to have students attain certain knowledge and skills is great. In some states, accountability measures rely heavily on academic preparation more aligned with university preparation rather than vocational preparation (Manset & Washburn, 2000).

Citing the dearth of program alternatives and the alarming rate at which students with disabilities are unsuccessful in general education classrooms, Cole and McLeskey make clear that if students with disabilities are to be successful in general education courses, significant changes will need to be made. Specifically, changes to classroom organization, curriculum, and instruction are necessary to meet the needs of a more diverse groups of students (Deschler as cited in Cole & McLeskey, 1997).

Effective Instructional Practices

Kameenui and Carnine (1998) have identified six principles for the design of curriculum and instruction that accommodate the needs of diverse learners. In their discussion of the application of these principles, it becomes clear that while the principles are a necessity for students that experience significant barriers to learning, all students, from the brightest to the most challenged, will benefit from the application of these principles. Incorporating strategies and curricular structures that accommodate diverse learners improves the learning environment for everyone. Kameenui and Carnine identify the following design principles:

1) *Big Ideas* are principles, heuristics, or themes that make possible the most efficient and broadest attainment of knowledge. They suggest that the curriculum and subject area topics be always organized around big ideas.

2) *Conspicuous Strategies* are the approximations of the steps that experts use covertly to solve complex problems and difficult tasks. Though students may learn strategies on their own, much evidence suggests that students benefit from good strategies being made conspicuous for them.

3) *Mediated Scaffolding* refers to the support that a teacher, peer, a task, or an instructional material offers to the learner.

4) *Strategic Integration* refers to the combining of essential information in ways that promote the construction of new and more complex knowledge

5) *Primed Background Knowledge* refers to the background knowledge that can be helpful in learning new concepts. This may require teaching essential elements and concepts that facilitate depth of understanding.

6) *Judicious Review* is defined as "the process of repeatedly considering material in sensible and well advised ways"(p. 11). Kameenui and Carnine suggest that review be (a) sufficient for new understandings to develop, (b) distributed over time, (c) varied, and (d) integrated.

While Kameenui and Carnine's principles might be best aligned with a direct instruction model, these guiding principles are not inconsistent with a more student-centered approach, where students are actively engaged in real-life problem solving. Work in the area of cognitive development indicates that students understand more deeply and perform commensurate with deep understanding when they are actively

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involved in the social negotiation of purposeful and whole tasks and receive teacher or peer support (mediated scaffolding) for pieces of tasks they have yet to master, or to develop initial conceptual understanding. (Cohen, 1994; Forman & McPhail, 1993; Jorgensen, 1996).

Instructional planning and instructional delivery must accommodate differences in students' learning styles and preferences. All students learn differently. Responsive and accessible instruction aligns with this fact. Students with learning difficulties demonstrate increased levels of active engagement during one on one, small group, and independent work arrangements, making whole-class instruction less desirable (Logan et al., 1997). Teachers with large class sizes often struggle to provide the level of individualized attention that promotes the engagement of all students, given the diversity of learning styles and preferences represented among the students.

The academic success of students with disabilities and low-achieving students require that teachers adapt and modify instructional activities of the general education classroom. By beginning to consider the full range of learners during initial instructional planning, the amount of adapting and modifying necessary to effectively support all students in the classrooms is significantly minimized (Cole & et al. 2000). Planning for diverse learning styles and abilities from the beginning typically means better instruction for all students, as opposed to the few that might benefit from add-on adaptations (Cole & McLeskey, 1997; Udvari-Solner, 1995)

Robbi Kronberg and her colleagues at the University of Minnesota (1997) and Carol Tomlinson (1999) have called for teachers to differentiate content, process, and/or product based on students' readiness, interests, and/or learning profiles using a variety of

instructional and management strategies. Differentiated instruction is responsive instruction, whereby teachers attend to and plan for student differences when designing instructional activities and assessment.

Cole (1996) and other researchers (Walther-Thomas, Korinek,& McLaughlin, 1999) suggest that collaborative partnerships are essential to transforming general education settings into instructionally responsive classrooms where the needs of a broad range of students can be met. These authors described the development of teaching partnerships and the substantive issues that the partners collaboratively addressed to effectively remove barriers to learning that were present in the general education classroom. Specifically, the teachers (in these studies) worked together to make classrooms more learner-centered and less teacher or content-oriented. They made changes to course curriculum, the methods used to deliver instruction, and the classroom organization. Other researchers agree that changes are necessary for classrooms to be responsive to the needs of all learners (Jorgensen, 1996; Lipsky & Gartner, 1997). Collaborative teaching has been found to increase the capacity of teachers to make these changes.

Collaborative Teaching for Supporting All Learners.

The educational reform literature demonstrates widespread agreement that schools need to develop strong professional communities and support for teacher collaboration (Louis, Marks, & Kruse, 1996). Studies concerning collegial relationships among teachers reveal, however, that sustained, authentic, and meaningful collaboration is an extremely rare event (for many reasons) (Trent, 1998). As Hargreaves's 1994 study suggests, sometimes teacher collaboration is contrived and consequently involves

teachers resisting the interference of other teachers and administrators in their teaching work.

While today's policy makers appear confident that establishing high academic standards will create effective schools, research indicates that no single factor assures both high levels of student achievement and professional satisfaction (Furhman, 1993; Goertz, 1995; National Commission on Teaching and America's Future (NCTAF) 1996). As expected, research indicates that many influences coalesce to support students and professionals (Little, 1982; Louis et al., 1996; McGregor & Vogelsberg, 1998). Teacher collaboration is a supportive feature that contributes significantly to well-being and productivity in schools, (NCTAF, 1996; Slavin, 1995; Walther-Thomas, Korinek, McLaughlin, & Williams, 1999). The increasing diversity of today's school population makes collaboration essential both in terms of a lone teacher's ability to meet the diversity of students' academic needs and to understand students' diverse experiences (Villa, Thousand, & Meyers, 2000) Collaboration is particularly important in programs for students with disabilities and others with significant problems with school achievement (Friend & Cook, 1996). As schools strive to be inclusive and general education reform initiatives increasingly attend to the school success of all students (including those with disabilities) effective teacher collaboration may be critical for success.

Realizing the value of collaboration to enhance student success and to facilitate the support of educators, many professional groups include the development of collaborative skills in teacher preparation and professional development sequences (Council for Exceptional Children 1998; National Staff Development Council 1994;

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Council of Chief State School Officers, 1996). Professional collaboration among educators enhances co-teaching relationships. Co-teaching is one of many strategies for supporting the success of students with disabilities as they participate in general education classrooms (Cole & McLeskey, 1997). Though including students with disabilities in the general education classroom is becoming a widespread means of education and service delivery, schools vary widely on the arrangement by which special education teachers support students in general education classroom (Friend & Cook, 1996). Many schools utilize an arrangement in which the special education teacher spends little time in the general education classroom, but instead focuses on modifying materials and assignments and offering the general education teacher consultative services as needed. Teachers might collaboratively plan approaches to instruction and assessment, but rarely do they collaboratively implement the approaches, leaving the in-class work to the general educator. When special education teachers do have opportunities to be a part of a general education classroom, many report spending the bulk of their time watching and circulating within the classroom and reading aloud quizzes and tests to students who need extra assistance (Rice & Zigmond, 1999). Teachers fulfilling this role often report dissatisfaction, feeling more like a teaching assistant than a teacher. This phenomenon seems more prevalent at the secondary level where content becomes more specialized. Clearly, the presence of a special educator and general educator in the same room does not in itself constitute either cooperative teaching or a collaborative effort.

Friend and Cook (1996) identify several co-teaching approaches that primarily differ in the degree to which teachers experience and practice parity in planning and

delivering instruction to all students. In the specific approach of "team teaching," two teachers jointly share responsibility for planning, delivering instruction, and assessing all students (Friend & Cook, 1996). They identify collaborative, or team teaching as the best form of co-teaching. When teachers collaboratively plan instruction, the necessity of adding-on adaptations and modifications to lessons as an afterthought can become obsolete. Collaborative planning can greatly facilitate instructional planning that deliberately seeks to decrease the barriers to learning that many students encounter in the classroom. When special and general educators plan collaboratively, it is much more likely that the foci of eliminating and reducing barriers to instruction remain constant. Friend and Cook caution that special educators must be present in the classroom for long enough periods of time to be useful. If partnerships are to be truly collaborative, special education teachers cannot be considered or cannot consider themselves as "extra." And the teaching arrangement must be intensive and sustained. Irregular and brief participation of special education teachers in the classroom does not provide the necessary support that general educators need in order to reach all students.

During observations that were done during the pilot study, I quickly hypothesized that Alex and his teaching partners practice a team teaching model (as described by Friend and Cook). Throughout this report, I use the terms team teaching, co-teaching, partner teaching, and collaborative teaching interchangeably.

The challenges of co-teaching are great (Rice & Zigmond, 1999; Trent, 1998). Though co-teaching may be a preferred model of support, implementing such a model can prove difficult. Bauwens, Hourcade, and Friend (1989) identified several obstacles to implementing and sustaining a co-teaching model of support. They reported that time

allocation and individuals' abilities to develop co-working relationships were serious

obstacles. Further, Bauwens and colleagues (1989) argue that teachers may be reluctant

to enter into collaborative teaching relationships for fear that their workload would

increase significantly. Friend and Cook (1996) have identified many characteristics of

collaboration that are essential to teaching partnerships, as well as personal characteristics

and skills that benefit the effort. The research literature on team teaching at the secondary

level is scarce and findings from this study can contribute to expanding our

understanding of how one teacher has negotiated team teaching relationships with several

different teaching partners, some of whom he has worked with for several years.

Pugach and Wesson (1995) examined both student and teacher perspectives of

team-taught classrooms. Students and teachers alike were positive in their assessment.

Students felt that two teachers working together in the classroom created a motivating

learning environment. Teachers reported increased confidence in meeting the needs of all

students. Two teachers working side by side in the classroom has potential to transform

the classroom in other ways. Students are in effect exposed to a model of a collaborative,

mature relationship that is hopefully based on respect, trust and care.

Walter-Thomas (1997) examined co-teaching models in 23 different schools. She

reported positive outcomes related to both social and academic skills for low-achieving

students. Specifically, she found that students with disabilities reported improved

attitudes and self-concepts and the establishment of positive peer relationships. Students

specifically attributed these changes to increased teacher time and attention. Educators

(both special and general) described professional growth, personal support, and increased

motivation as outcomes of their collaborative teaching, and general educators felt that

their classrooms had transformed to resemble more of a community. Ripley (1998) reported similar findings. Meyers and colleagues (Meyers, Glezheiger, & Yelich 1991) found that teachers preferred the in-class support model of cooperative or team teaching over other types of support models, such as collaborative consultation. Both general educators and special educators reported frequent on-going collaborative meetings, increased focus on instructional issues, and an increase in their knowledge. In that study, general educators reported an increase in their use of instructional strategies to support diverse learning styles in other settings. Fedrico, Herrold, & Venn (1999) explored the professional development implications of team teaching and reported favorable outcomes. Specifically, teachers gained new insights into their own teaching abilities. As in the Meyers et al. study, teachers developed new teaching and management strategies that they used in other settings, and they planned to use the strategies in future settings.

Creating Connections and Caring Relations

As a former teacher of adolescents who had been identified as emotionally disturbed or behaviorally disordered, I take great interest in teachers who appear able to connect with students on a personal level, maintaining interactions that are respectful, yet not emotionally over-involved. All teachers that work with students who have experienced failure at school must be adept at making connections to students and helping them to remain or become reconnected to school and to classroom communities. Emotional and social attachment is a critical link to academic success (Hawkins & Catalano, 1999). Leone (1992) reported that weak attachment to school is associated with poor school performance and school drop out and delinquency, a finding supported by many researchers. (Elias, et al., 1997). Why then, do the practices of teachers and

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schools pay such little attention to emotional factors? Why is there so little curricular

attention to interpersonal relationships and to the development of interpersonal

competencies? As a teacher working closely with students accused of displaying

disturbing behaviors, it was readily apparent to me that most adults within schools are

unprepared or unwilling to attend to the emotional needs of such students. Still other

teachers appeared emotionally and socially disengaged, lacking passionate attachment to

the students, other teachers and personnel, or to the curriculum. Given high rates of child

and teen suicide and high incidences of school violence and aggression, schools must

begin to address the degree to which school and classroom practices promote or impair

emotional health and social competence.

Most recently, the concept of emotional intelligence has been popularized through

the NY Times 1997 Bestseller of the same name by Daniel G. Goleman. In this book,

Goleman urges educators to adopt curriculum and pedagogy that enhance emotional

intelligence; a view espoused by many educational and human development researchers.

While Goleman's work is very popular, it is mainly a collection of the work of

researchers John Mayer and Peter Salovey who first coined the term, emotional

intelligence. Unlike Goleman, these researches, along with colleague David Caruso, have

extensively studied the construct and investigated implications for teaching and learning.

They define emotional intelligence as "the ability to process information, particularly as

it involves the perception, assimilation, understanding and management of emotion"

(Mayer and Cobb, 2000). Mayer and Salovey (1995) argued that important social

competencies and adaptive behaviors might be improved by using emotions as a

foundation for thinking or by thinking with emotions themselves. Similarly, Linda

Lanteri (1996) director of the Resolving Conflicts Creatively program in the New York City public school system, maintains that conflict resolution is grounded in acquiring the skills of an emotionally intelligent person.

Teacher and schools undoubtedly play a pivotal role in the emotional well being of students. Interpersonal relationships and communicative skills enhanced through social interactions promote the development of social and emotional "intelligence" (Elias, et al. 1997). Unfortunately, the standards-driven context of today's reform efforts often ignore important social and emotional outcomes for students, a situation particularly troubling for those students whose affective needs warrant such attention. While school and teacher mission statements frequently pay homage to broad educational constructs with outcomes that address citizenship, social relationships, interpersonal problem solving, and moral development, district or statewide accountability systems rarely include such outcomes in assessment plans. As reports of school violence and student apathy fill our news, many educational researchers plead for schools to attend to the social and emotional needs of our youth (Consortium on the School-Based Promotion of Social Competence 1994; Elias, et al, 1997; Noddings, 1992; Walker, Colvin, & Ramsey, 1995). The current emphasis on narrow outcomes of academic achievement explicit in standards based reform efforts reflects a limited view of education that most assuredly denies the opportunity of an appropriate education for some students (Leone et al., 1992). Maine and Kentucky represent two states that include a range of student outcomes in the areas of personal and social development as well as academics (Commission on Maine's Common Core of Learning, 1991 as cited in Leone, 1992; Kentucky Department of Education, 1991 as cited in Leone, 1992).

Addressing students' social and emotional needs through the establishment of particular proficiencies and outcomes represents a potentially necessary but certainly an insufficient move on the part of schools and educators. Like Buber (1965), I believe that relationships are fundamentally the heart of education. Contemporaneously, Nel Noddings (1992) envisions an educational system firmly grounded on the idea that student competence (whether academic or social) must be cultivated in an environment of caring. Noddings argues that while teachers have the responsibility to develop and sustain caring teacher-student relations, in which they are the careers, they not neglect their important role of assisting their students to strengthen their capacity to care. She recommends a restructuring of traditional and nontraditional areas of study around themes of care. While a virtue of care has long been considered a quintessential teacher characteristic, Noddings makes very clear that caring is not a set of specific behaviors, an individual attribute or a virtue to be developed. "Caring is a way of being in relation" (p17). Caring is about knowing who prefers a warm embrace over a response of quiet deference and realizing how, when, and where to deliver either. Caring is living with others, with animals, with ideas, with objects, with the environment, in a manner that Nodding characterizes as one of engrossment—"an open nonselective receptivity to the cared-for" (p15).

Creating caring relations with students who not have experienced being cared-for or with those who have not experienced mature caring relations can be difficult (Morse, 1996). Students with troubling behaviors often defy teachers' best efforts at creating and nurturing caring relations. Noddings (1992) has suggested that one's "capacity to care may be dependent on adequate experience in being cared-for" and that we teach students

about caring (or moral reasoning) not through principles and application but that we "show them how to care by creating caring relations" (p. 23).

While one might conclude that caring relations primarily depend upon individual capacity and ongoing interpersonal engagements, classroom and school practices are equally, if not more important. After all, interpersonal relationships are embedded in the larger context of school and classroom practices. Thus, caring teaching and a caring teacher are not the same constructs. It is most certain that students who encounter inordinate amounts of school failure and who have been subjected to the individualized and specialized techniques of remedial and special education have not experienced schools as places of care. Despite interactions with caring teachers, the structural practices of sorting students by ability level and the remediation of perceived deficits may impede the development of caring teaching. Though teachers frequently desire and extend great effort to develop caring relations, the teacher-student relationship remains primarily focused on the failures of the student because of the institutionalized practices to sort and separate atypical achievers and provide those at the "bottom" with the shallow and lean curriculum of remedial and special education classes. The deficit model that persists in special education programming and service delivery likely precludes students feeling cared-for, despite our "good" intentions.

"To care and be cared for are fundamental human needs" (Noddings, 1992, p xi). Though in infancy, illness, and old age, the need to be cared for by others is pressing and acute, the need persists throughout one's lifetime. At every developmental stage, human beings need to be cared for in the sense that they need to be understood, recognized, received, and respected (Noddings, 1992). The report of the National Commission of

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Teaching and America's Future (1996) states that "competent and caring teaching should be a student right" (p. 6), yet the report fails to talk about how this ideal might be accomplished.

Our youth today need more support than ever to master the developmental tasks, yet the economic and social changes of the past four decades have reduced the availability and existence of these supports (Postman, 1995). Single parent families are common and most two-parent families involve both parents working outside the homes. Extended families are rarely present, providing little help with child care options. Close-knit communities of adults that once provided supervision, role modeling, and guidance for children have become communities of strangers. The school community represents a source of significant connections, if schools can become places where youth are embraced by caring adults who realize the importance of high academic expectations as well as social and emotional learning (Elias et al., 1997). Additionally schools must become places where caring teachers provide effective and responsive instruction, attend to high levels of student engagement, and create and employ purposeful supports for student success. In so doing, teachers engage in caring teaching.

Regardless of the specific path various reform efforts may suggest (e.g. improve basic skills, raise standards, strengthen critical thinking, prevent drug use and violence) most educators and educational researchers agree that the schools must better prepare youth to become knowledgeable, responsible, and caring adults. Similarly, all agree that this task is formidable. "Few realize, however, that each element of this challenge can be enhanced by thoughtful, sustained, and systematic attention to children's social and

emotional learning" ((Elias et al.,1997. p.1). And this learning, according to Elias and others, begins with creating a safe and caring classroom community.

Various theorists have framed the notion of caring in practice. McEwan (1998) frames caring in part, in terms of democratic management and practice. Stanley (1998) discusses the legitimate use of teacher authority as an essential component to developing a classroom based on empathic caring. Similarly, Noblit (1993) suggests that "caring in the classroom is not about democracy--it is about the ethical use of power" (p. 24). He further writes that caring relationships and student attachment are the same constructs. Student perceptions of attachment and caring relationships can shed light on specific student and teacher actions that might represent these constructs. Noblit's notion seems similar to Nodding's (1992) conception of caring as a relation as opposed to a character trait. Gilligan (1984) also discusses caring as relational and reciprocal.

Noblit suggests that we revisit the definitions of teacher-centered and child-centered as he defends the teacher-centered classroom. Noblit, who views "caring as moral authority" (1993, p. 26) sees the caring classroom as one where teachers are in charge of what students do. Teacher-centered teaching means assuming a moral responsibility for the education of young people. Teachers who embrace caring as moral authority assume responsibility for making the classroom work for all students. Noblit suggests that a teacher's moral authority might be constituted in the events, the distress and struggling of classroom life, and in the teacher's sheer enjoyment of students. A teacher's moral authority can be constituted in the very events that might be traditionally be considered to threaten one's authority.

Noblit reports an experience in which he came to question much of the "knowledge" he had of teaching, specifically the use of teacher authority. He concludes that classroom context will largely determine the teaching practices that are possible and necessary. Specifically, he asserts that when teachers deliberately create and maintain a climate of connectedness and solidarity, many practices that position a teacher as an authority of power become unnecessary. However, a teacher's moral authority in the classroom will be instrumental to creating such a climate. Noblit defends teacher-centered practices as serving to promote collectivity and connectedness among the classroom members. Teacher-centered practices can offer many possibilities for a teacher to attend and connect to students, which Noblit characterizes as an insatiable demand on the part of students.

What Noblit argues is that teacher power and control in the classroom can and should be exercised in the service of continuity--he argues that one teacher's teacher-centeredness established continuity. Following Noblit's ideas, collaborative teaching may enhance continuity of people, an important element of helping students to develop caring relationships. Noblit accepts that teachers have lots of power and distinguishes power used for its own sake and power used in the moral service of others.

William C. Morse, an icon in the field of educating at-risk and troubled or troubling students, comments:

> It is sad to note that proposals for school reform or special education inclusion seldom give attention to conditions which would facilitate the school as a setting for the continuity of caring for all children. (1996, p. 106)

Clearly, establishing the school as such a setting is possible and critical in helping

students become caring and responsible adults. Strong relationships between teachers and

students are crucial to students' academic success (Jones & Jones, 1995). Using survey

data from the High School and Beyond Study, Wheelage and Rutter (1986) concluded

that student perceptions of lack of teacher interest were positively correlated with

dropping out of school. Ted Sizer (1990) founder of the Coalition of Essential Schools

views personalization as the single most important factor that contributes to keeping kids

in school. Shore (1996) tested Sizer's ideas at Huntington Beach High School in

California. As the assistant principal, Shore designed and led several initiatives aimed at

increasing targeted students' access to adults in the school. The simple, low cost efforts to

personalize relationships between adults and students resulted in dramatic improvements

at Huntington, including a decrease in suspensions, a virtual elimination of expulsions,

improved GPA among the low achieving students, and earning a state award as the most

distinguished school.

Morse (1996) visited classrooms of teachers considered outstandingly effective in

an effort to identify underlying attributes. These teachers were considered exemplars in

teaching students identified to have emotional and behavioral difficulties. He discovered

a common and powerful thread. The teachers knew their students and had a deep

empathy for the difficulties in their lives. Yet, these interpersonal attributes were not

sufficient. Morse argues that, "love alone is not enough" (p. 107). Without order in the

classroom, a sense of purpose or meaning, little will be accomplished. So while teachers

must provide structure and control, to what end? Structure and control for its own sake or

for the appearance of a teacher as ultimate authority is most likely to result in a classroom

of disengaged, albeit seemingly compliant students. Morse convincingly argues that effective classrooms are established and maintained primarily through relationships. Much of the literature from alternative education settings and environments that ultimately work for students that did not succeed in public schools stresses the importance of human attachment (Brendtro, Brokenleg, & Bockern, 1990). The importance of human attachment is not unique to students who struggle with school nor does the importance rest solely in students developing social competence. Results from the Child Development Project (1994) indicate that students work hard, achieve more, and attribute more importance to schoolwork in classes in which they feel liked, accepted, and respected by the teacher and fellow students (Lewis, Schaps, & Watson, 1996).

Noddings (1992) argues that interactions with and observations of mature caring relationships are necessary for students to develop the capacity to care. The teachers in this dissertation study represent mature adults in relationships that appear to have a strong component of care. The collaborative relationships among the adults in these classrooms may enhance the attachment that student feel to school, to the teachers and to each other.

Back to the Purpose: Research Questions

In an effort to understand the work of Alex Morse, a teacher identified by so many as competent and responsive to the needs of struggling students, and in considering the research regarding relevant practices, I developed some questions to guide my work. In my observations and through interviews with Alex, his teaching partners, and his students, I explored the following questions:

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1) What instructional practices does Alex employ in his work teaching students with and without disabilities?

2) In what ways does the collaboration between teachers occur and how do students and teachers experience the collaboration?

3) In what ways do the collaborative teaching partnerships contribute or restrict the teachers' capacity to meet diverse social, academic, and emotional needs of students?

4) How do students experience Alex and his co-teachers?

5) To what extent and in what ways do Alex and his teaching partners contribute to the development of community within the classroom?

6) How do co-teachers experience their collaborative partnerships?

7) In what ways are caring relations present or not present in the various classrooms?

8) To what extent and in what ways does Alex create caring relations within the classroom?

Chapter 2

RESEARCH METHODS

I made decisions about the research design based on the purpose of the research, which was in part formed by some brief pilot work that I did with Alex. Strauss (1987) promotes framing the design of interpretive research by initial ideas that emerge from pilot work. In an effort to lay out the best plans for this dissertation, including some initial assumptions about what might be in the data, I spent several months in the setting, with Alex and his teaching partners, putting myself in a better position to make informed decisions about the design of this study and which literature might be relevant to aid in that design. This early time at Eleanor Roosevelt High School made apparent that an interpretive case study design was most appropriate in order to understand the process of Alex's work and the experience of those involved in this work.

Gaining Access

Having spent time at Eleanor Roosevelt with Alex and colleagues prior to the pilot and the dissertation work was crucial to gaining access to the research site. Alex and I had talked on occasion, mostly about issues pertinent to his mentoring of pre-service teachers as they worked with him, but also about my areas of interest, including teacher preparation, educating students who struggled with education, collaborative teaching, and inclusion as a service delivery model for educating students with disabilities. I had eaten lunch in Alex's room with Alex and other teachers in the math department several times during my four years at Roosevelt High as a supervisor of university students.

Our professional relationship made the issue of access relatively easy. When I first approached Alex about wanting to study his teaching in an attempt to understand the

work of a teacher considered exemplary, his only hesitation seemed motivated by his genuine humility. As we discussed the methods involving participant observation and semi-structured interviews, Alex expressed no discomfort with the idea of my spending hours in his classes or with my talking with him and others about his work. Perhaps because Alex had already participated in a study that focused on the restructuring of special education services at the school, he was excited at the prospect of a study which would similarly involve examining and reflecting on his work as a teacher. Alex specifically mentioned at that time that he had enjoyed our conversations about teaching, my comments and questions to pre-service teachers he had mentored, and that he was excited about the prospect of being involved in a study that would necessarily foster his thinking about his own work. Although pleased that Alex was eager to allow me to investigate his work, I also requested that Alex offer his input into the study, including potential research questions and ideas for observations. He immediately offered that student actions and perceptions were important to any study that purported to be about good teaching. We agreed that I would talk with students as well as purposefully observe Alex's actions in the context of student engagement and success in classes taught by Alex.

I complied with all requirements of the Human Subjects Committee at Indiana University, including obtaining informed consent from all participants and from parents when student participants were under the age of eighteen. Alex, each of his teaching partners, nine students, and one other teacher all returned signed informed consent statements before they were involved in observations or interviews.

Methodological Framework

I undertook this study to provide an in-depth understanding of the complex work

of a particular teacher regarded as effective by his peers, administrators, practicum

students, student teachers, and university field experience supervisors. What had emerged

from the brief pilot study was that Alex's valuing of relationships and his attention to

students' academic, social, and emotional competencies were seemingly integral to his

work. The purpose of this dissertation was not to seek some sort of confirmation on what

makes for an exemplary teacher or to test a particular hypothesis regarding teaching

practices associated with particular student outcomes. Instead, I set out to provide an in-

depth examination of Alex's work, his perceptions and experiences, and those of his

students and teaching partners. In part, I wished to carry the "teacher's voice" and the

"student voice," to try to document teaching by valuing the perspectives of those closest

to the work. I sought methods that would examine these perspectives and consider the

broad context of Alex's work, not narrow his work to a particular set of hypothesized

teaching methods or some a priori student outcomes. After decades of analyzing and

conducting research on effective teaching, Lee Shulman (1992) suggests:

> I conclude that our quest for the full picture the complete pedagogue is fruitless if
> we insist on maintaining a traditional conception of social science. We are, as
> human thinkers, actors, and believers, unable to achieve completeness, destined to
> be partial from a disciplinary, an ideological, and a policy perspective. To be
> properly comprehensive, we will need to forgo our traditional dream of a social
> *science* of education. We will instead move toward a more local, case-based,
> narrative field of study. . . . (p. 26)

Though I do not characterize this work as a true ethnography, ethnographic

methods did inform the design. I deliberately planned to present thick and rich

description of life in Alex's classrooms by experiencing his work first-hand and talking

with others who also were experiencing life in Alex's classrooms. The interpretive case-study design and methods to collect and analyze information are appropriate given the purpose of this research. As Eisner (1991) and many others have suggested, if qualitative or interpretive research in education is about anything, it is about trying to understand what teachers and learners do in the school setting, in the process of education, and in the lived experience of those involved in the process (Merriam, 1998). To achieve my aim of coming to know Alex's work, his relationships with others, and how Alex's work was experienced by other teachers and students, it was essential that I "be" with them: watch them, talk with them, record what I saw and heard, and collect other artifacts in the settings where they worked and learned. Only in this way could I even hope to develop a contextualized and local understanding of the complexity of this particular teacher's work.

Collecting Information

Typical case study data collection methods, including the recording of field notes from classroom observations, conducting semi-structured interviews, and gathering documents (Merriam, 1998) were employed. I collected and analyzed data consistent with Erickson's notion of interpretive, participant observational fieldwork (Erickson, 1986). Participant observational fieldwork entails developing relationships with the teachers and students involved in the study by observing their work as one participates in the physical settings of that work.

I collected data over a two-year period. During this time, I participated primarily as an observer in two of Alex's four general education math classes at least once per week, carefully recording events by taking extensive field notes and writing my own

comments about what I was seeing and hearing in an attempt to begin the first level of analysis. The two math classes that I chose for data collection involved Alex in co-teaching situations with two different teaching partners. During the second year, partnerships changed, and Alex co-taught with a third partner, as well as one with whom he co-taught for the first time. In observing this partnership, I had wanted to observe how the co-teaching process developed. (I talk later about how situational variables made this very difficult). So, by the end of data collection, Alex and three of his teaching partners, and students from four different general education classes had participated in my study. This purportedly allowed for a more complete view of Alex's work as each of the partnerships and the stages of development involved particular and somewhat distinctive negotiations, depending on the characteristics of each co-teacher. During the second year, I also spent at least one day per week in Alex's special education Resource period, a sufficiently different setting to warrant including it as well as to the inclusion math classes. The resource class setting offered an opportunity to see Alex teach solo and to more frequently experience his creation and use of individualized strategies and support structures. Broadly, in both inclusion and resource settings, I observed Alex's interactions with students and teachers, what specifically he did to develop and maintain relationships with others, as I attempted to discover the nature of those relationships. Through these observations and interviews, I also became familiar with Alex's knowledge of the curriculum, and his use of instructional strategies and classroom practices that he employed in his teaching.

In addition to observations, Alex offered his perceptions of teaching, his students, and his colleagues during planned interviews and spontaneous conversations. I interviewed

and had many informal exchanges with each of his collaborative teaching partners at various times during the study and even interviewed one of the partners again after he moved to another school and no longer taught with Alex. I also interviewed another teacher who was the special education department chair and had worked with Alex in the context of his coordinating student Individualized Education Plans (IEP's) as well as in assisting him with personal professional development plans. This department chair offered a perspective of a colleague who did not work collaboratively in the classroom with Alex, but who collaborated with him in coordinating instruction for identified students. I also individually interviewed nine students, three of whom had been in at least one of Alex's classrooms for more than two years.

Additionally, documents, mainly in the form of handouts, instructional materials, and student evaluations were collected and reviewed.

The nature of participant observations. I spent a great deal of time with Alex, his teaching partners, and the students as they negotiated pre-algebra, algebra, or problem solving in the general education classroom. Because the students and teachers in these settings were accustomed to field experience students and other visitors and frequently interacted with those visitors around social and academic topics, I quickly became involved in the activities of the classroom. Many students in the math classes would invariably ask me questions when both teachers were occupied. Similarly, Alex or his partner teachers would sometimes direct a question to me during interactive lessons or other small and large group instructional activities. These interactions helped me to become an accepted and trusted participant-observer. During my visits I sat in various locations near the back of each classroom, wherever a seat was unoccupied, recording

notes by hand. Because the students frequently recorded notes or wrote on papers at their

desks, my note taking was a natural activity of the setting and did not appear to make the

students or teachers uneasy nor did my note taking draw undue attention to me. Alex told

the students early on that I was there to try to understand more about teaching and

learning in high school classrooms and this seemed to sufficiently satisfy the students'

curiosity. Although my involvement in the general education classroom activities was not

extensive, there were times when my attention and participation interfered with my

observations or the chance to record detailed notes as activities transpired. Some things

were missed, and other times I would record observation notes only after I was able to

return to my notepad. Often, I spent time directly after a class furiously recalling more

details and making comments regarding the interactions and actions that I had recorded.

The resource room represented a setting with a different instructional format. The

students, Alex, and sometimes an assistant or a pre-service teacher, generally sat at one

large and one small table, working in flexible groups on homework activities or working

toward goals that originated in other courses. It was somewhat of a more interactive

setting for me than was the general education classroom and I participated more overtly

during the resource class period. Given the range of subject matter and instructional

activities with which students interacted, it was nearly impossible for me to sit and only

observe during many of my visits. Students frequently needed and quickly sought the

assistance of an idle adult. (Idle in their mind meant not actively engaged with a student

or group of students.) There were many days in which I was able to sit somewhat on the

fringe and record rather copious notes. There were other days in which I was engaged

with students for most of the class period. Having experience as a classroom teacher and

attending to multiple events simultaneously, I learned to observe Alex's interactions much like I had kept at attentive eye and ear on those troubling students from my teaching days. On these busy days, I remained in the classroom after the students had left, writing pages of notes about Alex's activities and interactions in the classroom.

My notes were an attempt to capture a running record of the classroom events, mainly focusing on Alex's interactions with others and the instructional activities of Alex and his partners. I wrote notes in incomplete sentences and used my own invented shorthand. In addition to writing in my own notebook, I also recorded notes on handouts and within the text used by the students. These hand-recorded notes were oftentimes supplemented by audio-recordings of my own general comments and recall of impressions that I made in the car after leaving the school. From previous research involving similar fieldwork, I had learned that observation notes must be developed into more complete field notes within one or two days of the observation, or details were sometimes lost and richness compromised. Once back at my computer, I gathered observation notes recorded on the various classroom materials and in my notebook, and set out to write field notes that would be comprehensible to me over time and to others who had not been present for the observation. Additionally, I listened to any audio-tapes that I had created the observation notes and most typically wrote interpretive notes to accompany the observation notes.

I visited Alex's classrooms until I felt the data were saturated, meaning that I began to see the same type of interactions and instructional activities over and over again.

Semi-structured and open-ended interviews. Initial interviews with each of the participants were semi-structured and consisted of a set of general questions specific to the various participants. (See Appendix D) I added many questions or observations to

each, based on what I had observed with the particular individual. For example, when Alex started teaching with Kevin during the second year, I immediately noticed that Alex was in front of the room much of the time. The general question about sharing primary instructional responsibility changed to something like, "Alex appears to be leading instruction much of the time, how did the two of you negotiate this?"

I formally interviewed Alex six times over the two-year period. The initial interview with Alex was designed to understand more about his working relationship with the partners, rationale behind their decisions of organization, activities, and curriculum, his ideas about teaching and learning, and his perceptions of students' needs and responses. Subsequent interviews with Alex included stimulated recall questions based on classroom observations, and questions to clarify events or interview statements that might extend my ongoing understanding of Alex and his work. Stimulated recall questions involved my recalling a situation or event that had been observed and asking Alex to talk about his motivations and actions within that situation. For example, I might recall, "Remember last week, after you had passed back the quizzes, you arranged the students in small groups for the review? Can you tell me how you decided to group the students and why? " Sometimes, I read sections of my field notes that described a particular instructional dialogue or interaction and asked Alex to tell me about his reasoning or thinking at the time.

Several other teacher participants were also important to understanding Alex's work as a teacher and of the nature of the relationships within the classrooms. Two interviews with each of Alex's teaching partners, Ted Kirchen, Rick Wier, and Kevin Ward offered additional perspectives. The initial interviews with Ted, Rick, and Kevin

were semi-structured, focusing on the nature of their relationship with Alex, their teaching experience, background, self-perceptions, thoughts about collaboration and inclusion, and details about how they came to work with Alex, including their perceptions of Alex's teaching. Questions for the second interviews of Ted and Mike were more individualized and focused on asking the teachers about particular events that I had observed in the classroom or inviting their responses to my tentative and evolving interpretations. Rick, who taught with Alex during the first school year that I began data collection, had moved to another school during the second school year and he and I communicated electronically and by phone after he had left. Our communication primarily focused on Rick's past experience in working with Alex. Given that he had returned to a solo teaching arrangement, his perceptions of the co-teaching relationship with Alex were particularly unique as compared to the perceptions of Alex's two current partners.

In addition, I had many informal and brief conversations with Alex and other teachers over the course of the study. I continued to periodically eat lunch with the teachers from the math department.

Semi-structured interviews with several students from the collaboratively taught math classes were important to better understand the relationships that had developed among the students and teachers in the classrooms and how Alex and the collaborative teaching effort had impacted student's academic and social experiences. I also interviewed one student who was not currently in the collaboratively taught classes that I was observing, but was instead in the resource class where Alex was the sole teacher. He had previously been in one of the co-taught math classes.

I attempted to choose a diverse group of students from Alex's classes to participate in the study. Given my adherence to the Human Subjects Committee Rules, in the end the sample of students that actually participated might best be described as a diverse group from among those that returned the signed informed consent statement.

In the first year of the study, after having observed in the various classes for six to seven weeks, I made several lists for myself, organizing students within each of the three classes into three groups based on my perception of their level of engagement (relative to other students) with the activities of the class. Students in the "disengaged" category were those students who I had observed to need lots of teacher attention and urging to participate in the classroom activities. They were also students who I had observed to be absent more frequently than other students and also who I had observed to arrive without necessary materials or completed homework on several occasions. Students in the "mostly engaged" category needed some reminders to participate, were absent a few times, and sometimes did not bring materials or completed homework. The "engaged" category consisted of students whose participation in instruction and learning tasks required virtually no individualized prompting from the teachers. They were rarely (if ever) absent and consistently arrived with homework completed and all necessary materials. Most students fell into the "engaged" and "mostly engaged" categories. From all of these class lists, I chose 2 females and 2 males from within each of these three categories to approach for participation in the study. I also attempted to choose students who roughly represented the ethnic demographics of the class, in so far as those characteristics were visually apparent. The Human Subjects Committee had required that any contact that I made with students (either to invite participation or to actually conduct

interviews) take place in locations that would prevent the teachers in the study from observing our interactions. Compliance with this requirement resulted in a great deal of legwork on my part, and some ingenuity, as I scoured the lunchroom, followed students to other areas of the school, and even left messages for students on the student message window, asking students to call me at home or meet me at some location in the building at a pre-determined time.

Most of the students whom I approached (explaining briefly my purpose and their level of participation) claimed to be interested, took the forms, and promised to return the informed consent statement with a parent signature. Only one student declined and did not take the forms. During the spring of the first year of the study, it become painfully apparent to me that returning the appropriate paperwork in order to participate in the study was not a top priority for any of the students, regardless of their level of expressed interest. After giving out multiple duplicate forms to the selected students over a period of several weeks and having to cancel at least six scheduled interviews because the students neglected to bring back the signatures, I finally secured the participation of three students, only one from the original list. Two of these students were eighteen and thus did not need a parent's signature. I secured consent from the other student and his father when I ran into them at a community event and readily produced a blank form when the student mentioned the study to his father and told me that he would bring the form to school the following day, an assurance he had made on at least a dozen previous occasions.

During the late fall of the second academic year at the school, I followed the same method to choose students and I had an equally difficult time getting students to return

the consent forms. Like the students from the spring, all of the students that I asked appeared eager to talk with me and several assured me that their parents would not object, yet consent forms were not returned. They arrived on-time at our designated meeting spot, keen and willing, but without the necessary forms. Several argued with me that the forms were not necessary and that they could decide whether to be interviewed, urging me to relax the rules and talk with them. They denied that the safeguards were necessary and interpreted my unbending response as distrustful of their judgment. Given that many of these students were 16 or 17 years old, I empathized with their feelings and apologized if it seemed to them that I lacked faith in their judgment.

Fearful that too much waiting would preclude adequate time for observations and additional conversation that follow the interviews, I returned to my original lists and invited more students. By late winter, I had conducted interviews with six more students.

The nine students, five males and four females, came from four different classes that Alex taught. Eight of the students were enrolled in the collaboratively taught math class and one was enrolled in the Resource class at the time of the interviews. Of those eight, two had previously been in a Resource class taught by Alex, and one was in both collaboratively taught math classes, Pre-Algebra and Problem Solving. Another had also completed Pre-Algebra with Alex and Rick two years prior. Sam, the student from the current Resource class, had taken Algebra with Alex and Rick the year prior to being interviewed. Thus, many of the students I interviewed had experienced Alex in multiple and various teaching contexts. Although I feel confident that I was able to include students who demonstrated diverse levels of engagement in Alex's classes, I was not able to secure the participation of any of the five students from the collaboratively taught

classes whom I had categorized as disengaged. As mentioned previously, students placed

in this category were students who seemed to require great effort from Alex and his co-

teaching partners to become involved in the activities of the classroom. Just as they often

did not bring their materials to class and continually needed prompting from the teachers

to participate in the activities, they did not return the consent forms or in the case of one

student, expressed no desire to participate in an interview. Interestingly, two of these

students, Gabe and Ricky, were two of the seven or eight students who argued with me

about the necessity of the forms. Looking back, I wondered why they would want to

share their thoughts with me, someone they perceived as distrusting of their judgment

before the interviews had even begun. Oh, the joys of Human Subjects compliance!

The semi-structured interviews with the students focused on their perceptions of

the assistance they received from Alex, Ted, Rick, and Kevin, and on their thoughts about

the teaching arrangement and the classroom climate, including teacher effectiveness, and

self-reports of satisfaction, engagement and success within the class. Interviews with

students also included issues of teacher-student relationships, helpful instructional

strategies and features, and preferences for types of assignments, supports, and routines.

The student interviews took place in the late spring of the first year and early

winter of the following year, after I had spent more than ten weeks in the selected classes

in which they participated. Such scheduling allowed me to observe the students in the

classroom before and after their individual interview, so that observations informed

interviews and interview responses broadened and focused my gaze in the classrooms,

consistent with the methodological teachings of Bogdan (1992). I was able to have

unique conversations with students around incidents that I had observed and based on my

interpretations of their actions, to point to specifics that either corroborated or seemed to be out of sync with their comments. After interviews, I sought observational data that substantiated or challenged their views or recollections. Often, in the months that followed the initial interview, brief interactions occurred naturally with the students and I was able to incorporate such interactions into interview data with the permission of individual students.

With participants' permission, all interviews were audio taped and brief notes were recorded during some of the interviews. The audiotapes were transcribed for analysis. One of the interviews was conducted with the assistance of an interpreter, a colleague of mine, fluent in both Spanish and English.

Documents. I also collected and analyzed various documents. Instructional materials used within the class sessions that I observed constituted the bulk of these documents, including pages from the Math Manual. The manual was a resource text developed primarily by Alex with editing input from students and his teaching partners (see Appendix A). Inspired by ideas offered by certain business leaders in the community, Alex had created the Math Manual in an effort to help the students access and use information, as opposed to memorizing formulas and operation sequences. The Manual was a step-by-step guide to solving various types of algorithms and using a variety of formulas, and included graphic and mnemonic aids. The hand-written pages were visually clear and uncluttered, with important words underlined, written in capital letters, or highlighted by boldface font.

Teachers actively used the Math Manual during all demonstrations and explanations and explicitly taught and later directed students to use the manual as they

worked through various math problems within the pre-algebra, algebra, and problem-solving curriculum. Students were encouraged to use the manual on all work, including many quizzes and tests.

I also reviewed and analyzed instructor/course evaluations solicited from the students (administered routinely by Alex and his partners) and any documents related to Alex's teaching (award nominations, workshop evaluations, news articles). Various print materials that Alex and his partners had posted around the room or notes that Alex created as he assisted students with their work were also included.

Analysis of data

The first level of analysis occurred very early—during data collection. Composing field notes and transcribing interviews frequently generated ideas that were recorded as observer commentaries or asides. Other analytic notes were created and recorded in a separate log. These analytic notes consisted of personal ruminations, reflections, interpretations, insights, and questions regarding bias and subjectivities. As I had done in other research projects, I generated a log of all activities, attempting to make notes of each "work session" whether it was collecting data, reading notes, developing questions, etc. Carrying this log with me everywhere, I recorded insights as they arose during other related (or seemingly unrelated) activities, activities like attending lectures, reading, teaching, or even watching television. Summaries of interview transcripts and field notes were created. These summaries provided the beginning of a set of categories or themes for organizing the data. In-process memos were written regularly (Glaser, 1967). These memos represented concentrated efforts on my part to identify and develop analytic themes while I was still actively in the field and while still writing field notes

(Emerson, Fretz, & Shaw, 1995). Constructing such memos also helped me to identify data that did or did not support particular analytic themes and to examine the absence of particular themes or categories. Such examination was important not only to guide on-going data collection, but also to attempt a balanced view of the evidence. I frequently reviewed sets of recently generated field notes, interview transcriptions, and documents to stimulate the writing of these analytic, in-process memos. These memos were stored electronically, forming an analytic file.

Inductive data collection necessitates that data analysis begin with the first bit of data collected and continue throughout the collection. On-going data analysis was critical to developing interview questions, focusing observations, and to the review of documents. Analysis of the data began immediately and extended throughout the final drafts of writing, but the bulk of the analysis occurred near the end of fieldwork.

All data, including field notes, interview transcriptions, and documents were electronically stored and paper copies were collected and organized in respective sections in a very large three-ring binder. This binder also stored analytic notes and memos, and various files related to member checks, subjectivity reflections, and peer debriefings. Sections of the binder gave the names for electronic folders, so I was able to work with both paper and electronic copies.

When data collection was finished, and I had slowly transitioned out of the site, I read through all of the data from beginning to end so that I might have a clear picture of the whole of the data (Glesne & Peshkin, 1992). Certain words, actions, and participants' ways of thinking stood out. As I read through the data, I attempted to identify key words or phrases, frequently occurring actions, patterns, and topics that were contained in the

data. These words and phrases became tentative coding categories which were used to begin to sort the data (Bogdan, 1992). Analysis did not rise solely from the data however. Coding categories, themes, and analyses were in part shaped by my perspective, the values I hold, and the ways in which I make sense of the world. My reading of the literature, my past experiences as a high-school teacher, and my on-going work with schools around issues of inclusion, classroom management, and effective instruction undoubtedly directed my gaze and focused my attention during data collection and analysis.

<p style="text-align:center">Validity and Trustworthiness</p>

Inquiry scholars present multiple and often disparate views on the notion and necessity of validity in qualitative research. While validity is a construct most often and more appropriately associated with measurement and assessment tools, various researchers have written about why validity can be claimed by qualitative research, how research might be designed and conducted to enhance internal validity, and ways in which the concept of generalizability might be replaced with the more appropriate goal of "understanding" (Erickson, 1986; Goetz & LeCompte, 1984; Wolcott, 1994).

There is considerable debate among qualitative researchers concerning the concepts of validity and reliability (Merriam, 1998). A number of inquiry researchers have suggested that the terms validity and reliability are not appropriate for qualitative studies. Terms that have been suggested as more appropriate to describe qualitative studies are trustworthiness, verisimilitude, and credibility (see for example: Connelly & Clandinin, 1990; Glesne, 1999; Lincoln & Guba, 1985). Wolcott (1994) expanded on

Geertz (1973) to identify particular measures that a researcher might take in order to "get the story right," and I incorporated these suggestions into my work. He suggests:

1) **Talk a little, listen a lot.** I struggled with this because I am overactive and talkative by nature. I took great pains to be silent—both with thoughts and with spoken words. Conducting this research really helped me to listen in the classroom.

2) **Record accurately.** Writing observation notes in classrooms was a routine activity. I recorded notes by hand while in the setting, focusing on Alex's actions and interactions. I wrote down what I saw and what I heard. Transforming the handwritten notes into word processed notes that would be understandable to readers as soon as possible after observations enhanced the accuracy of the primary data.

3) **Begin writing early**. I did not do this as much as I would have liked. While I wrote many observer comments and short analytic notes while I typed observation notes or read over interview transcriptions, I did not begin writing sections of the report until very late. This required more time on my part just locating and examining bits of collected information.

4) **Include lots of primary data in final reports.** (Let readers "see" for themselves.) As will soon be evident to the reader, I have used a great deal of primary data in this report. Many times, I have included long sections of observation notes and readers can hear the voices of the participants. While I want readers to see for themselves the "evidence," I have attempted analyses of these data.

5) **Report fully—including discrepant, supporting, and confusing data.** I made particular note of data that appeared inconsistent with my interpretations and I also acknowledged data that seems particularly tentative.

6) **Be candid—reveal feelings yet avoid imposing judgments.** I came to this study because I was impressed with an individual's practice and character. There will always be biases at work in any research project. I attempted to examine my subjectivity, by writing notes about my biases and I include a section in the last chapter about my personal and professional biases as they relate to this study.

7) **Seek feedback**. Early on in the study, I offered field notes to Alex and his teaching partners for their comments. I was most interested if my accounting of events felt "right" to them. I used any participant feedback as data. Once I had made some sense of the whole and had documented my interpretation in some coherent fashion, I shared emerging themes and other analytic notes with Alex for his comments and suggestions. In addition, I sporadically shared ongoing writing and interpretations with two colleagues, one of whom was also doing research at Eleanor Roosevelt and the other who had completed research in the setting. These member checks and peer feedback not only helped me to examine my subjectivity, they also resulted in richer and clearer details in descriptions.

8) **Try to achieve balance.** As I moved more deeply into the analysis and writing stage, I returned to the site several times. I also returned frequently to my field notes and interview transcriptions to determine the extent to which my written account fit the actions of the individuals and the setting in which they worked.

9) **Write accurately**. Although I tired easily when reading over my own words, I did force myself to read my manuscript with an eye for coherence and internal consistency. This served a counterpart to checking for accuracy of the field account. I hope that my very thorough reading, checking very closely for technical adequacy, enhances the readability and accuracy of the report for the reader.

Multiple types of data, multiple sources of each type of data, and reference to multiple theoretical perspectives (various kinds of triangulation) increase the confidence of the study's findings, enhancing the trustworthiness of the dissertation (Glesne & Peshkin, 1992). As noted above, sharing descriptive field notes and interpretive efforts with the research participants as well as with two colleagues comprise a specific effort to enhance the accuracy of the account and my capacity to report that account. Merriam (1998) argues that prolonged engagement in the research site adds to the credibility of data collected in participant observation research. In addition to the 13 months that I spent at the school specifically for this study, I had spent a great deal of time with Alex and his teaching partners in their classes and with Alex in the resource setting even prior to the pilot study beginning. Through my supervision activities at the feeder middle school, there were very many students in any of Alex's classrooms at Eleanor Roosevelt who had experienced me sitting in several of their classes during the four years prior to the study. Alhough I know that I had some impact on the activities of the classes (some days more than others) I am confident that my observations accurately reflected the daily activities, interactions, and climate of the various classes that existed there, whether I was present or not.

Chapter 3

SETTING THE STAGE

In this chapter, I familiarize the reader with the school and classroom settings where I observed Alex Morse teach. I describe Eleanor Roosevelt High School, including an abbreviated history of the school's effort to restructure special education services. I also introduce Alex and each of his co-teaching partners.

Eleanor Roosevelt High School

Demographics and Curriculum

Located in the Midwest city of Holly Grove, Eleanor Roosevelt High School is the younger of two high schools in the school corporation. (There is a small alternative high school in Holly Grove that is younger than Roosevelt.) Holly Grove has a population of approximately 65,000 people and is home to the largest state university, which has an enrollment approaching 40,000. Roosevelt serves urban, rural, suburban, and university communities. Although the city enjoys many cultural and entertainment options similar to large cities, Holly Grove has retained much of its small-town feel. Despite the recent retail and residential growth sprawl around Holly Grove, cow pastures could be found within two miles of campus as late as 1994.

Roosevelt opened in 1972, following the consolidation of three local high schools. Serving students in grades 9-12, student enrollment averages approximately 1400. State records report that 85% of Roosevelt's students are White, 6% are Black, 5% are Asian, 2% are Hispanic, and 5% are Multi-Racial. Twenty-one percent of Roosevelt's student qualify for free or reduced lunch. Over 90 teachers and administrators are employed at Roosevelt.

Approximately 90 students at Roosevelt are identified for special education services. Seventy-four of these students are included in general education classes. These students are typically those labeled with the high-incidence disability labels of learning disabilities, emotional disabilities, mild mental disabilities, attention deficit disorder, and attention deficit hyperactivity disorder. Others are labeled with cerebral palsy, Asperger's Syndrome and autism spectrum disorder.

The curriculum includes over 140 different course offerings and allows students to design academic programs to meet their individual needs. Graduation requirements are based on work completed in grades nine through twelve. Relevant to this study, all students are required to complete an Algebra course with a grade of B- or better. Students are also required to pass a state mandated standardized achievement test, which includes a mathematics portion and language arts portion, in order to receive a high school diploma. Special features of the curriculum include Advanced Placement and Accelerated Learning courses, Vocational/Technical Training, Work-Study Programs, Interdisciplinary Studies, and independent study. The school offers a modified Block 8 scheduling format, with some courses following a Block 4 schedule. In block scheduling, each school day is divided into 4 periods of approximately 90 minutes each. Block 8 classes meet every other day and Block 4 classes meet every day. The core beliefs of the school are posted near the office area and on it's web site. (See Figure 1) These beliefs focus on students' academic and emotional needs and reflect concern for creating an environment conducive to students' sense of personal well-being.

Figure 1. Core Beliefs of Eleanor Roosevelt High School.

1. All students deserve a safe place to learn.
2. All students deserve equal opportunity.
3. All students deserve a quality education.
4. All students deserve to feel emotionally safe.
5. All students deserve respect.
6. All students deserve to be appreciated for their inherent learning style.
7. All students deserve a wide array of options.
8. All students deserve to have dreams.
9. All students deserve the necessary supports to succeed.
10. All students deserve a meaningful and relevant curriculum.
11. All students deserve an adult advocate.
12. All students deserve open access to the curriculum.
13. All students deserve a chance to be trusted with responsibility.

Restructuring for Inclusion at Roosevelt

In the late 1980s, teachers and administrators at Roosevelt began a collaborative investigation of special education service delivery within their school. At that time, Roosevelt had been one of the first high schools in the state to enroll students with severe disabilities and work toward community integration by involving students with severe disabilities in supported employment opportunities. Students with "mild" disabilities (high-incidence) attended self-contained classes in a departmentalized structure. A number of factors prompted the investigation and initial discussions, but in general, teachers and administrators were concerned that the predominant service delivery model for students with high-incidence labels was not meeting their needs, student expectations were low, homogenous grouping was ineffective, and that at as a group they were committed to improving educational outcomes and experiences for students in special education. The group felt strongly that students with disabilities deserved access to the general education curriculum alongside students without disabilities.

After spending several years analyzing needs and planning, this group created a new model for special education service delivery in which general and special education teachers would collaboratively teach various grade level sections of math and English classes. These sections would include students identified for special education. Starting with just two core subjects, the effort began with four teachers, all volunteers. At the time of this study, collaborative teaching had extended to all core curricular areas, involving over twenty faculty members and teacher participation remained voluntary. Only a few self-contained classes for students with high incidence labels remained. In addition to the supports provided in the context of co-taught general education classes, special education teachers continued to provide additional support to students within the context of "resource rooms." The resource periods were designed to provide students with academic assistance and support through tutoring, instruction in learning strategies and study skills, living skills, transition planning, and individualized instruction in basic academic skills.

The Teachers and The Classes

Alex Morse

Alex Morse is a tall, lean man in his mid to late forties. His everyday dress of twill slacks and polo shirts is consistent with his athletic build and casual nature. Though certainly not shy, he presents a quiet and unassuming demeanor. His thoughtfulness is balanced by a brilliant sense of humor, and while Alex frequently reminded me that he does not "take things too seriously, " I consistently experienced Alex as a man concerned about and intensely committed to many ideals and to others in his life—respect, care, justice, his family, his students, and his colleagues. His passion for young people, for teaching, and for life itself is apparent to all who know him. Teresa Tierney, the special

education department chair at the time of our interview, spoke about the personality

styles of both Alex and Ted, one of his teaching partners at that time. She became very

animated as she said:

> Ted and Alex are super, super people, I mean they are just fun to be around, I don't care where you are, um, they're quick witted. They laugh at themselves and the world, they enjoy life. They're both thinkers, but they enjoy students, they enjoy what they're doing, they enjoy each other, um, you should be a little mouse in the car when we drive to these workshops and it's the three of us. . . . It's wonderful, and I love every minute of it. Time just goes by like that, you know, and we're there. Um, dinners are great, you know, time just flies. And I think that's probably what happens for kids, too.

Rick Weir, Alex's co–teacher of four years at the start of this study shared his

perception of Alex as a fun, committed, and dependable colleague and friend. Rick

shared these sentiments:

> I think that we make it fun for each other. I know that I can depend on him for anything. Absolutely anything. Anything. Anytime of the day, anytime of the night, I can call him. I can call him right now and say, "I need your help, will you come?' Absolutely, without a doubt. He is the most genuine person, nice person, that I have ever known or ever heard about. Ever. And caring. He is a friend first. More than a colleague, more than a co-teacher, he is a friend first and foremost. And I think that's what I value more than anything, our friendship.

Alex holds two Master's degrees—one in Secondary Math Education and another

in Special Education—as well as an administrator's license. He has taught for 26 years

and 24 of those have been at Eleanor Roosevelt. He has never opted to seek a position as

an administrator.

Teaching was not Alex's initial career plan. Alex first attended the Air Force

Academy where he received a bachelor's degree in mechanical engineering. Finding his

own values at odds with the values of the Academy, and dissatisfied with a "desk job," he

decided early on not to continue with the military. Working more with papers than with

people, he worried that his time and talent would not result in the kind of impact he was

hoping to make. Having worked some with children in various community programs,

Alex considered that his enjoyment of youth and desire to have a more active job might

better be served by a teaching career. Given his educational preparation as an engineer

and his passion for math, mathematics education seemed the clear and logical choice as

an area of major study. Special education was not initially part of his teacher preparation

path. Seeking guidance in choosing a minor area of study, a college counselor

encouraged him to become certified in special education. At that time, in the early1970s,

male special education teachers were scarce and in great demand. The counselor assured

Alex that special education certification was a guaranteed route to employment as a

teacher. Alex appeared slightly sheepish when he recalled this event, worried I think, that

he had just been recorded as saying that a positive job market motivated his entry into

special education as opposed to the frequently reported impetus of "wanting to help the

struggling learner." He reflected on his decision to follow the counselor's advice:

> Looking back, I'm really glad about going into special education. At the time, I
> did it for the job prospects, but now I'm really glad. Real teaching comes in to
> play when you work with students for whom learning is difficult, for whom
> motivation is difficult. That's real teaching. I did like and do like the challenge of
> discovery—finding, creating something different that will support the student who
> is frustrated and/or unsuccessful or needs to figure out how to circumvent a
> specific difficulty.

Alex's History at Eleanor Roosevelt High School. Alex began teaching at Eleanor Roosevelt in the fall of 1979. Hired as a special education teacher, Alex joined a department faculty of ten others. At that time, the school used a modified departmentalized model to deliver special education services to students in self-contained settings.

Though Holly Grove was a long way from his native Seattle, Alex found the small town/big university community to his liking. An avid follower of all types of sports, the presence of a big ten university added another level to the fierce competition between high school basketball and football teams, which Alex enjoyed. His wife, Renee, also teaches at Eleanor Roosevelt High School as a special education teacher. Two of their children graduated from Eleanor Roosevelt, one attended at the time of this study and two others were at the feeder middle school. As both a parent and a faculty member, Alex was a devout fan of Eleanor Roosevelt athletics and was very much involved in the life of the school, volunteering to help out at extra-curricular events and serving on faculty committees.

Well-respected by the faculty, he was chosen to serve as one of the leaders in the 1990 restructuring at Eleanor Roosevelt that involved including students with disabilities in general education classrooms. Although he admitted to disliking confrontation, others perceived him as committed faculty member who takes a stand on issues he sees as important for student well-being. As Teresa pointed out:

> His relationships with the teachers within the school is very good overall. There are some people that he rubs the wrong way because he speaks his mind about issues. Again, he's an individual who thinks things through, and has certain standards [for the adults] just as he does for the kids. And if he doesn't' see those being adhered to for one reason or another, he's not shy about bringing those issues to the floor. And sometimes that's seen as challenging. I think there are

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those individuals who feel uncomfortable when that has happened. But overall, I think that Alex is respected by all the faculty members that are here, in terms of the things that he does both inside and outside of the school day. He's a huge supporter of extra-curricular activities and though he does not sponsor a club or coach a sport, he attends all sorts of events. He helps out with all sorts of activities for the kids.

Alex Morse was one of the first special educators that volunteered to collaboratively teach when the school restructured special education service delivery. Inclusive programming at Roosevelt High has received national recognition (Council for Exceptional Children, 1995) and school personnel from as far away as Japan have visited the school to learn about inclusion. According to administrators and university personnel that have worked closely with the faculty during the first several years of the initiative, Alex has been a big part of their success. Current colleagues describe him as innovative and flexible, a great collaborator, and an extremely competent instructor. He has partnered with four different general education math teachers and each have reported great satisfaction with their working relationships and positive outcomes for students. Early in the initiative, Alex presented regularly at professional development workshops related to inclusion throughout the state and he continues some of that work today. As Alex began a new co-teaching partnership during year two of this study, he remains a central player in sustaining Roosevelt's inclusion effort.

Alex's co-teaching partnerships. Alex first began co-teaching with Ted Kirchen and Brad Carroll. Brad had left several years before this study began. During the first year of this study, Alex was teaching in two different collaborative teaching arrangements. He and Ted, who had been team-teaching together for over ten years, were teaching one section of Algebra. Alex and Rick Weir were collaboratively teaching one section of Algebra and two sections of Pre-Algebra and were in their fifth year together.

Since the Algebra classes followed the Block-8 schedule, students and teachers met for these classes on Tuesdays and Thursdays for 90 minutes. The schedule for Fridays alternated, with Monday-Wednesday classes meeting or Tuesday-Thursday classes meeting every other week. The Pre-Algebra classes followed a 4-block schedule, whereby teachers and students met for a 90-minute period daily. What this meant for Alex was that he taught with Ted for 90-minutes every other day and he taught with Rick for at least 3 hours every day. Alex was not teaching in a solo arrangement during the first year of the study.

Partnerships had changed when I returned for the second year of observations. Rick had taken a job in another district to be nearer to his family and Kevin Ward had stepped up to partner with Alex. Kevin and Alex co-taught two sections of Pre-Algebra, following the 4-Block schedule and Ted and Alex taught one section of Problem Solving, following the 8-Block schedule. Alex had also returned to one 4-block period of teaching the Resource course.

Ted Kirchen

Ted Kirchen and Alex began their teaching partnership when Eleanor Roosevelt first implemented the Collaborative Teaching Program in 1991. Because the special education faculty had been physically "integrated' into the building with Alex's room in the "math pod," Alex and Ted had already established a collegial relationship prior to beginning their teaching partnership. In fact, it was his knowing Alex that persuaded Ted to agree to the collaborative teaching without much hesitation or thought. Ted shared the circumstances of their coming to work together during an interview:

> Because she'd [the department chair] already mentioned that Alex was the partner
> I would be working with . . . I agreed really quickly, just right off the top of my

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head, I said, "Well fine, let's just figure out a way to do it. And part of that came from knowing Alex pretty well before that point. Some years back special ed folks got placed in various locations around the building to sort of be, the resource room right here in the math department. And that's great. So that's how I got acquainted with Alex . . . and we'd eat lunch together and we learned a little bit about each other's teaching and I deeply respected his and he respected mine, I think. That's why I agreed so quickly, I thought that working with Alex would be a wonderful thing to do, it would be a perfect way to improve not only my teaching and kind of re-energize in a number of ways. . . . But it would just be fun. You know, it would just be a fun thing to do.

Ted, a veteran teacher with more than thirty-two years of teaching experience served as the math department chair at Eleanor Roosevelt for over a decade, including the two years of this study. Despite his many years of experience, his bright eyes, smooth skin, clean shaven-face, trim physique and energy levels give the appearance of someone much younger than his fifty plus years. His neat physical appearance, the organization of his room, his teaching style, and his social demeanor immediately suggested "highly organized, or methodical." He moved with obvious purpose in the classroom and it was common to see Ted enunciate certain physical actions as he visually demonstrated the performance of various mathematical operations. Clearly passionate about the subject of math, Ted could often be found at the board or at the computer working on complex mathematical models when not instructing students. Students found him engaging and enthusiastic and I often saw him working with students during lunch or after school. His room was adorned with student projects, neatly hung on any available wall space. In addition to teaching with Alex, Ted taught several sections of college preparatory Calculus and Algebra II, including advanced placement classes.

Rick Weir

When I first met Alex and began visiting Eleanor Roosevelt in the context of supervising pre-service education students, Alex and Rick were in their second year of

co-teaching together. At the start of this study, they were in the fifth year together and by the study's end, Rick had moved to another school.

Rick, the youngest of the other teaching partners, looked even younger than his 34 years. Clean shaven, short hair, a muscular build, and incredible energy gave Rick the appearance of a popular school athlete. His standard dress included bright jeans or casual twills and a neatly pressed button down shirt. Raised in a small Indiana town, son of a teacher and a school administrator, Rick held high expectations for himself as a teacher and for his students. Undoubtedly influenced by his father's many years as a principal, Rick considered firm classroom discipline to be one of his strengths as a teacher. Through his years of teaching with Alex, Rick had confronted some of his beliefs more closely associated with "traditional" notions of teaching and learning and while he had not abandoned such beliefs, he admitted that some of his practices had changed as a result of working with Alex. I discuss these later in the chapter about collaborative teaching. In part due to the enormous amount of time they spent teaching together, their ease of communication, and common interests in sports, Alex and Rick experienced tremendous success and satisfaction with their co-teaching arrangement. Though not always like-minded about how to approach instances of student behavior, the two complemented each other well. Alex reflected on a situation that reflected their distinct approaches in which Rick had publicly expressed his disappointment with two students' poor performance on a test:

> No, that did not occur yesterday. [Reacting by making the students feel bad, guilty or making them feel that lack of effort made them less worthy.] And I really, really liked that. And none of us are saints, sometimes we get frustrated and Rick and I both, well you know, you do want to say, "Doggone, you didn't do crap, you know." Um, but Rick didn't go there yesterday, and I thought, I was pleased, I thought he did a real nice job with being genuine to himself. Rick is cut from a

different bolt than most of us, Rick is from small town Indiana, he is as conservative as they come. There is black and white to Rick. There is one way to Rick, there really is. And there're good things to that, there're good things to saying, this is the way you're going to do it, and these are the expectations, and you're going to reach these expectations. And then I come across from the other side, and I think we balance each other really well, but we respect each other.

Kevin Ward

Alex began teaching with Kevin in the second year of the study, after Rick had left to take a teaching job near his childhood home. Kevin had taught at Roosevelt since it opened in 1972, and before that he taught at the now closed Academy School. Kevin referred to himself (in our interview), as an "old fart." Though not as youthful in his appearance as the other co-teachers, Kevin's frequent smile and joviality with the students communicated that he still enjoyed teaching. Kevin has generally taught college-preparatory Algebra I, Algebra 3 and 4, and Geometry.

In the year prior to Alex teaming with Kevin, I had observed several times in one of Kevin's classes, thinking at that time of contrasting a solo taught and co-taught algebra class. Kevin struck me as a very traditional teacher as he spent most of the time at the board, in teacher dominated large-group instruction. After students corrected or passed in their homework, Kevin presented the day's lesson by completing several example problems, verbalizing any new steps, often with little student input or interaction. He lectured and manipulated equations with an automaticity that made his cognitive work invisible. When he finished the day's lecture, the board was filled with equations with no information regarding the application of procedures.

Some of the students often appeared bored and lethargic, though many of them copied the problems off the board as Kevin worked towards solutions. Some students slept until Kevin called out their names, and told them to copy the samples. After four or

five examples, Kevin would ask the students if there were any questions, and usually there were none. Students were then offered the remainder of the period to complete their work. Kevin sat up at his desk while students worked independently at their desks, calling out to students if they became too noisy or were obviously off-task. When students had questions or encountered difficulties, they generally took their book and materials to Kevin's desk and he told them where they had erred. Frequently he directed the students to simply re-work the problem from the point of the mistake. Sometimes, he applied the procedural steps, telling students, "Distribute—you multiply the 3 and the 5 to get 15x and then the 3 and the 9 to get 27y, and you have 15x plus 27y, so now plug in y and solve for x." Students were not typically at the desk long. One of the students that I interviewed spontaneously described Kevin as an extremely nice teacher who was also extremely boring.

The Co-Taught Math Classes and the Resource Room

I sat in several different classes to collect observations for this study. (See Figure 2) I spent different amounts of time in each classroom, reflecting the proportion of time that Alex spent with the various teaching partners. In all, over the course of two years, I observed in four different courses, four different classrooms, and four different teacher arrangements.

Figure 2. Alex's classrooms in which I conducted observations.

Course	Teachers	Schedule	Time	Year
Problem Solving	Alex & Ted	Block 8	90 minutes every other day	Year 2
Pre-Algebra	Alex & Rick	Block 4	90 minutes daily	Year 1
Algebra	Alex & Ted	Block 8	90 minutes every other day	Year 1
Pre-Algebra	Alex & Rick	Block 4	90 minutes daily	Year 1
Algebra	Alex & Kevin	Block 8	90 minutes every other day	Year 2
Resource	Alex & Ms. Reba	Block 8	90 minutes every other day	Year 2

Students enrolled in the Problem Solving Class for a variety of reasons, but mainly for required remediation after failing to pass the state mandated standardized test in 8th grade or after failing to pass the Graduation Qualifying Exam (GQE) in 10th grade. The classes represented all grade levels—Freshmen through Seniors. Students who had passed the GQE might take the class to fulfill graduation credit requirements, since they must earn six math credits despite their disinterest in taking classes past Algebra. Students in the Problem Solving classes could be broadly described as students who had not experienced much success with math. Many were over-age for class standing, having been retained one or more times and some were identified for special education. Each year, males outnumbered females, with approximately 3 to 4 males for every female.

The Pre-Algebra and Algebra Classes that were co-taught by Alex and his partners were labeled as Tech Prep classes. Tech Prep indicated an academic track for students that were headed for vocational or technical post-secondary endeavors.

The Resource class was designed to provide individualized assistance to students identified for special education services. Typically, students identified for special education services in the high-incidence special education categories of learning disabilities, mild cognitive disabilities, (also know as mildly mentally handicapped) and emotionally handicapped attended at least one Resource class per semester. Students with other special education labels also were included in the Resource classes, although less frequently. Class size ranged from 8 to 12 students and sometimes included an instructional assistant.

Alex did not have a Resource class during Year 1 of this study. In Year 2, he taught one Block 8 section of Resource. Two or three times per week, ten to twelve

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students spent 90 minute periods with Alex where they received help completing assignments and preparing for (or completing) tests assigned in the general education classrooms in which they are enrolled. Ms. Reba, an instructional assistant was there for part of the year. The students varied in age and class standing. They brought work from a variety of courses, including Chemistry, Business, Computer Science, English, Physics, Algebra, Geometry, Latin, Geography, Health, and History. As students identified for special education services, and as students who typically struggled academically or socially, all of these students might be considered at-risk for leaving school without a diploma.

Summary

Eleanor Roosevelt has a long history of including students with disabilities in general education math classes. The school's restructuring plan and decision to support students by using co-teaching instructional arrangements was site based, developed by a team of teachers and administrators over the course of two years. Alex was one of the original members of this leadership team and has contributed to sustaining the initiative, in part by agreeing to work with new partners as needs arose. Roosevelt's success with inclusion is widely recognized. I observed Alex's work in several different teaching arrangements and with several different partners. In this chapter, I have attempted to familiarize the reader with Alex, his teaching partners, and the various classrooms in which I observed. A more complete description of Alex, his thoughts and actions, constitute the remaining chapters.

Chapter 4

SUPPORTING STUDENTS' ACADEMIC SUCCESS

No teacher in today's educational climate of push for high achievement outcomes could be considered excellent if he did not make the attainment of subject matter knowledge and literacy skills central to his teaching. Although casual observers initially might be most impressed by Alex's rapport with students and the constructive social climate that he has fostered, a longer time in the classroom makes one aware of his expertise in designing and implementing elements of effective instruction that promote student engagement with academics. In this chapter, I address his subject matter expertise and masterful pedagogy in supporting the academic success of students.

Subject Matter Expertise

Academic Preparation

In his review of research related to the development of expertise, David Berliner (1992) proposed that expertise is generally domain and context specific, that "experts excell mainly in their own domain and in particular context" (p. 228) and that "expert knowledge will not transfer automatically across domains" (p. 233). Secondary teacher certification programs and secondary schools are organized according to this belief about expertise. General education teachers are specifically prepared to teach in a particular subject or content area (knowledge domains) and are then employed to teach specific content, with the expectation that they become experts at teaching particular subject matter. The vast majority of special education teacher preparation programs do not require a content area major, and instead prepare pre-service special education teachers to

design and implement generic instruction, learning strategies, and instructional accommodations to adequately address the academic learning differences of students with disabilities.

Historically, special education teachers at the secondary level have been criticized for their lack of preparation and mastery in a content area. Most states offer licensure that certifies special educators to teach grades K-12, without requiring a content area major. Apparently secondary level special educators are expected to be able to support students in all subjects in the context of Resource Classes, perhaps because it is assumed that they are familiar with subject matter content from their own K-12 and the general education part of their college education. Advanced college level preparation in a subject area is not required presumably because students in special education are not expected to achieve at advanced levels. With inclusive schooling becoming more common and the long needed call to raise academic expectations and accountability for students with disabilities, secondary special education teachers might benefit from content specialization. On the other hand, given the current shortage of special education teachers, demanding such additional coursework for secondary certification in special education is probably unrealistic.

In contrast to the typically prepared special education teacher, Alex was certified to teach secondary mathematics as well as special education. He also completed an undergraduate degree in engineering mechanics and served in the United States Air force as an engineer. Alex agreed that subject matter expertise was an important prerequisite for effective teaching and he said quite simply, "I have to have the knowledge and understanding of the content itself." Alex explained to me that solid content knowledge

and understanding enhanced his pedagogical skills, as achieving deep fluency in subject matter allowed him to "relax, to pay attention to student understanding, to laugh, to enjoy teaching and learning, to provide meaningful connections, to focus on application and performance."

Experience and Commitment

According to Berliner, extensive experience and time commitment contribute greatly to the development of expertise. Nevertheless, he also carefully notes that while all veteran teachers are not experts, it is unlikely that educators can achieve expert pedagogue status without extensive classroom experience. Alex has extensive experience in the teaching of mathematics. He also has extensive experience in supporting students who struggle with other content area courses.

Having taught for approximately 24 years, Alex Morse has logged over 22,000 hours as a classroom teacher. When his time as a student is added, Alex has spent at least 40,000 hours in the classroom. He also parented five children. Clearly, the extent of his experience in caring for and promoting the intellectual growth of young people was vast and undoubtedly contributed to his pedagogical competence.

Thinking about the work of teaching, including critical examination of one's practice, contributes to professional growth and to the development of expertise in teaching. Roosevelt's move to inclusion and Alex's co-teaching with several partners over the course of the past 12 years has required Alex to reflect critically on the practice of teaching. During our interviews, Alex displayed great enthusiasm to discuss, question, and deliberate on his own actions as a teacher as well as the school's structure and practices. He also exhibited considerable effort reflecting on whether and how his

teaching promoted student engagement and understanding. Interviews with others and observations of his teaching also indicated that Alex, with his teaching partners and other colleagues, frequently engaged in critical examination of their practices, as they shared dilemmas and offered feedback to one another. So Alex had not only extensive experience, he engaged in purposeful and sustained reflection on that experience.

Supporting students in the Resource class required that Alex achieve content area expertise beyond his academic preparation in mathematics. Because Alex realized the value of knowing subject matter and felt obligated to know the content well, he had educated himself in various content areas, from Chemistry to English Literature. His extensive pursuit of a wide range of content knowledge was noted in his department chair's evaluation of his teaching. Interestingly, Alex noted that his ability to prepare himself to teach unfamiliar content came from extensive experience. He knew which teachers to approach for instruction and assistance and what kinds of materials would be useful to keep for future use. He also claimed that after teaching for 20 plus years, he knew other sources of valuable resources, particularly for supporting students in content areas other than math. His extensive experience helped him to find and assess the educational value of the wealth of resources available. Through Alex's reflection, I came to understand how academic preparation and experience interactively contributed to his expertise. For Alex, preparation to teach in a content area was on-going and his many years of teaching facilitated his continuous growth in developing subject matter expertise.

To summarize, according to Berliner's criteria of subject matter expertise, Alex has the necessary credentials: extensive academic preparation and extensive meaningful and reflected-upon experience. Alex and his colleagues agreed that each of the co-

teaching partners must have solid content knowledge. Additionally, they all agreed that Alex's solid competence in content knowledge combined with knowledge and experience in addressing diverse ability levels contributed greatly to his effectiveness as a teacher of the various general education math courses and the Resource Class.

Curricular Specialist

When the school restructured for inclusion in the early 90s, Alex and his teaching partners felt strongly that the general education, basic math course needed an overhaul. The two teachers who had been teaching the course for years had serious reservations that the course was responsive to the needs of students with low-achievement levels. When Alex joined the conversation, the three teachers agreed that without substantial revision, the course would continue to fail to meet the needs of learners with disabilities or those students who struggled to meet graduation requirements in math.

According to Alex, the course (then called Basic Math) was originally designed as a remedial math class in which students were expected to memorize math facts through drill and basic computation. As such, the course stressed "getting the right answer" versus understanding concepts and problem solving processes. Alex and his new teaching partners recognized that if students were to be prepared for the workplace, they needed more instruction in applying information and in using tools to do so. In the workplace and in "the real world" students needed skills and competence to access information and apply procedures. Knowing what particular information to seek and which procedures to apply required that students develop conceptual understanding beyond the memorization of math facts and algebraic formulas. Alex, in particular, expressed great dissatisfaction with the textbooks. He felt that the textbooks that had been used were not only

inaccessible for many of the students with special needs, but that textbooks were not the best resource for helping students to learn how to go about accessing information and applying problem solving processes. The issue of math text readability has been suggested to compound the math difficulties of low-achieving students (Maccinni & Gagnon, 2000).

The teachers resolved their dissatisfaction with the course by revising it to be a course much more concerned with process rather than product. A big part of this revision involved replacing the textbook with what they called a course manual which was a resource guide developed primarily by Alex. Ted Kirchen, Alex's original teaching partner for the general education math course, described their rationale for the manual:

> We've done this math manual idea, you know, where the kids are receiving either class notes or pages that we produce, that capture techniques and procedures. You know, things that are difficult to memorize. And we're trying to put the burden on kids to bring that, it is to use reference skills, because what we saw in the context of some industrial kinds of visits that we made, we saw people whose jobs were very complicated. They weren't required to memorize everything, but there was just loads of reference material around. And so what they had to know was what did they need (in terms of a resource), where it was, find it, be able to read it and understand it, and carry out any instructions.

Out of the original Math Manual, came three similar, but course specific manuals for each of the various co-taught courses, again each of them developed primarily by Alex. The layout and general organization was the same while the content was unique to the academic standards for particular courses. The Algebra Manual was initially developed in 1992. Students and teachers contributed to its development, as it was under continuous revision. I observed Alex and his teaching partners distribute the manual one page at time. Presented on these pages were effective strategies to solve particular types of equations or perform specific mathematical operations (i.e. finding the lowest common

denominator). One page typically consisted of a condensed, yet highly organized description of procedures that often encompassed several days' worth of concept development, guidance, messages, and models for student performance of particular operations, as well as various extension activities. Because students and teachers used the manual as a guide to solve particular types of problems, teachers solicited student perceptions of needed changes to vocabulary, or additional steps and examples. This was an interactive revision process. Alex often re-distributed a particular manual page that contained the needed revisions. In this way, students understood that their feedback was valuable.

Each of the manuals began with a blank table of contents, which the students were required to complete as they received subsequent manual pages. The documents were handwritten in block letters and the information on each page was highly organized in a very readable format. Certain phrases were underlined, and some words or phrases appeared in boldface print. Boxes drew attention to particular information. Lines, letters, and numbers separated and sequenced the material. Model problems were displayed and solved using the step-by step process, with each step labeled and applied in a new pane. While some pages demonstrated the various ways a particular operation might be performed, most pages offered simple, step-by step visually accessible instructional plans and an accompanying demonstration about how to use a formula or perform a particular algebraic operation. Also included were several examples of the use of mnemonics to assist students in recalling the multi-step operations. Several reference charts, including a multiplication chart and a percent-to-decimal conversion chart were also included.

Calculator usage was described in detail, including graphics that instructed students how to use correct key sequence.

In addition to developing the manuals, in an effort to bring meaningful relevance to the mathematical content Alex and his partners developed an extensive collection of problem sets that included pragmatic word problems, Simply written, these easy-to-read story problems most often demonstrated to students how various mathematical concepts might be applied to everyday real-life problems.

<div align="center">Pedagogical Mastery</div>

Personalized Connections and Sharing Stories

For Alex, supporting students' academic work began by making personal connections to them, by offering each student some type of individualized attention, however brief. Whether in the smaller Resource classes, or the larger Pre-Algebra, Algebra, and Problem Solving classes, the periods typically began with Alex circulating among the students, providing some sort of individualized attention to each one. While his partner attended to the traditional housekeeping tasks of attendance, re-entry paperwork, arranging presentation materials and other things, Alex walked up and down each row of desks, greeting students and often suggesting specific ways in which they might get ready for the review of the homework or the day's lesson. Based on many hours of observations in other secondary classrooms, I found this routine to be unique. In his humble and selfless style, Alex explained that it would be impossible to prepare for instruction by making personal contact with each of 25 to 30 students were it not for the presence of another teacher to complete the necessary managerial and organizational tasks. While this may be true, what is possible and what actually takes place are two

different things. I have observed many co-taught classes in which neither teacher even attempted to offer personalized attention to individual students. The difference here was Alex, and the value that he placed on personalization and actualizing his belief that when students feel a certain level of attachment to the teacher they are more likely to connect to the instructional activities of the class.

Beginning each class period by offering students some sort of personalized attention, as described above, communicates to students that teachers care about their experiences, about their learning, and about their forging social and emotional connections to the curriculum. Alex' s habit of making such connections and then typically spending time with a story or other narrative appeared to effectively prepare students for the upcoming activities by engaging them socially in the activities of listening and thinking. The following notes, recorded during an observation in one of the co-taught classes, accurately represent Alex's routine start to class.

> *I had entered the room just as the tone sounded, behind the last student. Alex, standing at the door, greeted me by name, and just as I had witnessed him greet students who had entered ahead of me, he seemed genuinely glad to see each one of us, offering a big smile, a personalized greeting and an occasional pat on the back. Neither Alex nor Ted knew that I was coming, as was our arrangement. I am now seated at the back table where I can take notes unobtrusively.*
> *As students move to their seats, Alex circulates among them, talking a bit with each individual student as he walks up and down the rows. Ted stands near the front of the room taking attendance. I watch Alex as he stops at Tammy's desk and talks quietly with her, looking and pointing at a piece of notebook paper that appears to be her math work for the day. Tammy erases and rewrites something. They continue talking, and Tammy smiles back at Alex when he nods in response to her reply. With a pat on her shoulder, Alex offers affirmation of her effort and a word of encouragement before he starts up the next row. The majority of students are quietly socializing, and a few work on math, read, or do something else involving paper and pencils. Alex continues throughout the room, taking with students about their work, texts that might be on their desk, or some other personalized inquiry. He makes comments on preparation, welcomes back*

students who have been absent, and provides some gentle physical jostling to students who appear tired and are resting their heads on their desks. Observer Comment (OC): He reminds me of a coach who is trying to spark interest and motivation in his players before the game.

Once he has made his way around the entire room he moves to the front of the room, pulling out the days newspaper from his back pocket. "Here's a very incredible story about the world's most expensive bathroom," Alex declares with much anticipation in his voice.

This class as a whole appears somewhat lethargic and tough in terms of gaining and maintaining student interest. Despite Alex's personalized "pep work' to start the class, several of the students look rather subdued, slunk down in their seats or heads down. Andy and Eric's heads are back on their desks (despite Alex's having successfully roused them only moments before) with their eyes closed. Before he begins the story he asks students to estimate the price of certain bathroom fixtures that might be in their homes. As individual students share their estimates, Alex queries other students about their assessment of the estimate offered. He attempts to include all students (even rousing Eric and Andy once again) by urging the entire group to reach some consensus on various fixtures. Derek, a young man near who has not contributed yet, protests the idea of trying to arrive at certain price. Alex asks him to repeat more loudly his comment that because his family has just remodeled a bathroom, he knows that the price of various bath fixtures varies widely. Responding to the attention, Derek explains that he learned this as his mother and father shopped for various items. Alex acknowledges Derek's thinking, agreeing that there typically is a wide variation in prices depending on materials and design.

He uses Derek's comments to transition back to the news story, "What about a toilet made entirely of gold?" Students shake their heads and look to each other and laugh. Some guesses are offered and Alex continues, reading from the article, relating the materials and prices of fixtures and various items in "the world's most expensive bathroom. The effect of all this adds energy to the classroom that was not there when he first began. The majority of students are now engaged, making guesses and laughing in disbelief.

Eric raises his head and calls out, " A gold toilet? Now that's what I call a throne." He laughs at his own comment and Alex joins in. Eric replaces his head on his folded arms, but this time his eyes remain open and fixed on Alex.

After sharing a few more items and prices, Alex moves on, introducing the next news story by asking how many students have ever turned in a library book late? Every student raises a hand. Alex responds, "Well, here's a guy who doesn't turn in his books on time and now he's really in trouble." Alex reads from the newspaper that he holds in his hand, "A man was arrested after accumulating over 1.3 million dollars in overdue book fines. This brings laughter and looks of astonishment from the students. Even Andy, who had seemed to be asleep moments earlier, now looks on with laughter. Alex and Ted laugh heartily with the students, and each listen as various students spontaneously offer their own stories of being fined for overdue library materials.

Students repeatedly mentioned Alex's routine of starting class with personalized connections as something they valued. Students who frequently entered the class lethargic and seemingly uninterested often responded to Alex's individualized queries with animation and readied themselves for the upcoming lesson. Chuck, a junior who was hopeful about passing in his third try of Algebra, attributed his current motivation and interest in Algebra to Alex's personalized attention and starting the class with an interesting and entertaining story. Chuck explained:

> He's always at the door greeting everybody. Most teachers don't. They don't even say "hi" to you. They just say, "Let's get started class." Not Mr. Morse, He is always coming around, saying something just to me, but doing it for everyone. And he's always telling us a story about something he read, something humorous, to kind of start, something that gets us interested. It's not just about the math, but he has this sneaky way, well not sneaky, like bad, but this way of sneaking in the math. Sometimes he tells us these stories and they don't seem like math, and they aren't always, but sometimes in the end, he's getting us to do some math or think about some math when he tells the story. He shares these stories with us. Most teachers don't really like to talk to students, but he does.

One of Alex's trademarks was this sharing of curious and entertaining stories. He typically began the large group instructional lesson of the day rather slowly, starting the period instead with some type of narrative. Frequently he recounted reports from the local or national news, most often a high-interest story that frequently included mathematical concepts-if only by including lots of numbers or percentages. Alex picked stories that were first and foremost interesting or fun. Sometimes what made the story interesting was the connection to the lives of the young people. The local story about sanitary conditions at tattoo parlors and fines for servicing minors without parental consent was one such example. Some stories were not so explicitly connected to the lives of the young people, but focused on the incredible, such as the two stories relayed above from my observation notes.

As Alex shared personal narratives or news reports, the stories came alive, generating interest and delight among the students. He was always very animated in the telling, adding lots of humor, and sometimes visually representing ideas at the board. Students were drawn into the stories by frequent invitations to make predictions or inferences related to the stories' content. Peppering the stories with questions, Alex asked students to apply their understanding of fractions, ratios, percents, and other mathematical concepts. He also encouraged students to make connections to other educational coursework and to their lives. He frequently asked students to take a stand or share an opinion and to justify each. And through his own strong telling, Alex set the tone for students and teachers alike to be in a good mood, and be ready for the activities of listening and thinking.

Though a casual observer might see such opening activities as wasting valuable instructional time, I observed the personalized attention and the story sharing to have tremendous impact on student engagement and enjoyment. While many teachers neglect the latter and attempt to ensure engagement through a variety of extrinsic incentive systems, Alex facilitated both with authentic and natural activities, greeting students and the sharing of narrative.

Organizing Instruction

Good and Brophy (2000) suggest that there are three main activities that teachers structure in an effort to promote student learning. First, they present information, typically through explaining, demonstrating and modeling. Second, they facilitate student engagement in review, discussion, recitation, or other types of discourse related to the content. Third, they create and involve students in performance activities that provide

opportunities to practice and apply new skills or to create new understandings. While students are engaged in performance activities, teachers provide students with coaching, problem solving strategies, learning organizers, and other forms of scaffolds that students may need to perform successfully.

While Alex regularly engaged in these three main activities, I did not observe a linear sequence as implied by Good and Brophy and as outlined in models of direct instruction. Alex effectively structured his teaching in a way that integrated the three main activities of teaching, involving students in discourse and performance activities from the very beginning, as he and his co-teachers facilitated interactive demonstrations and explanations of new concepts and model problems. Although teacher talk and guidance were more dominant near the beginning of the lesson presentations, there were no long lectures or extended teacher demonstrations. Alex effectively guided students in review, recitation, and performance activities during the initial presentation of new concepts. Meaningful student participation in the interactive presentations, discourse, and performance activities was enhanced by Alex's provision of various forms of scaffolding. Supports were not simply offered to students during independent work time, but from the beginning of instruction, thereby facilitating success and encouraging active and continuous participation. Active demonstration and use of the Pre-Algebra, Algebra, and Problem Solving Manuals, again, resources developed primarily by Alex, were types of support regularly offered to students.

I offer examples and address in more detail the organization of instruction and the use of supports in the context of discussing Alex's communication abilities and his ways of scaffolding instruction in sections that follow.

Alex Morse's ability to effectively communicate, particularly by helping students to understand difficult language and abstract concepts, contributed immensely to the pedagogical expertise that was evident in his work with students. When asked to identify essential skills to be addressed in pre-service teacher education, Alex immediately offered that teacher training must help teachers to develop good communication and presentation skills. He explained that good teachers must be particularly skilled in taking "difficult concepts, instructions, ideas, language, and information found in textbooks that students typically cannot understand on their own and making it accessible."

Alex's competence with content knowledge and his expertise at presenting and communicating (often complex) information in a highly organized and concrete manner (including meticulous attention to visual clarity) was evident whether he worked at the chalkboard or provided individualized assistance to students at their desks. Working at a student's desk, he drew pictures and wrote explanations on paper that he left with the student. All materials developed by Alex, especially the various Manuals that I discussed earlier in this chapter, include a common language, simplified directions, visual clues, and graphic representations of relationships among ideas. Two of Alex's colleagues shared their appreciation for Alex's ability to effectively communicate mathematical procedures. Both also were convinced that Alex's profound ability to make the material more understandable to students had served as a model that enhanced their own teaching. Ted, Alex's original and long standing teaching partner, shared his insights:

> And we had to design these pages and try to make the language as simple as possible, and at the same time communicate these procedures and ideas. And Alex is *very good* at that. He has taught me *everything* I know about it. He is so used to making modifications, just visually how it looks on a piece of paper, or how it

looks on the board. Verbally, as well, no one can say something as clearly and efficiently, succinctly, as he can.

Another long time colleague, and then Chair of the Special Education Department, Teresa Tierny, had observed Alex's work in the classroom and during in-service workshops. She shared these thoughts:

> He speaks loudly and clearly, and distinctly, and kids or adults are instantly focused. He has a great facility for breaking things down to their most elemental level. . . . People can target exactly the important points . . . the core. He does that well verbally and he does that well visually for people in terms of things he puts on the board or in terms of the handouts that they use in the math class. All of those are of his design. . . . It is Alex that puts it down and it's very detailed but very concise, so that it's very easy for kids and adults to key into. When you look at something that Alex has written, your eyes are directed . . . the formatting, the highlights, the graphic structures, he knows how to make the text communicate.

Almost without fail, Alex's first move in assisting students in the Resource Class was to help students identify the nature of the tasks before them. Students (with or without input from Alex) may have determined that they would be working on a particular assignment from English, Foods, Chemistry, Geometry, or other classes. Before they began, Alex insisted that students articulate what exactly the assignment required them to do. Some assignments were rather straightforward in terms of directing students. Many required that Alex and the student re-state complex directions in steps, including projects that might require the integration of several different tasks over time. Other tasks involved building graphic organizers, or making study aids.

Student perspectives on Alex's ability to effectively communicate and therefore to help them understand difficult content knowledge surfaced within documents that I analyzed and in the interviews. In a note of appreciation, one student commended Alex for "putting things into words that I can understand." Several of the cards that Alex had received from students and several open-ended responses within the course evaluations

specifically commented on Alex's profound ability to bring clarity to understanding.

Each student interviewed mentioned Alex's adeptness at effective communication. Matt

identified Alex's explanations and directions as helpful teacher actions as he explained:

> He goes over everything very precisely. He gives you clear examples on the board
> and then he will have you do some examples. He takes you through the steps, one
> by one, and you are getting the whole process. Instead of coming up with some
> complex ways of solving a problem, he comes up with the easiest way you can do
> it in the least amount of steps. And I think by showing you the individual steps,
> one by one, it is giving the student a clearer view of what has been taught.

When I asked Erin which activities from the Algebra class helped her learning the

most, she immediately mentioned Alex's instructional clarity:

> He gives really good notes that are real detailed and in depth but also
> straight to the point. He really makes sure that everybody understands each little
> tiny fine point. He does not do it in a bad way or an annoying way, he helps us to
> understand better than any teacher I've ever had.

Tammy told me about her previous struggles with understanding many concepts in

8th grade math and that she felt Alex's clear explanations and demonstrations contributed

to her present success. She recalled:

> Some teachers, I had Pre-Algebra for two years and I didn't understand anything.
> The first day that Mr. Morse taught proportions, I understood it right away. He
> has this way. . . . of showing us. You know exactly what to do, and then why,
> why you would. And his teaching is, you can really understand things, you can
> see it, he gives you time to see it. If you have any questions he doesn't mind
> answering them like some teachers do.

 While Alex strived to bring clarity to instruction and materials, he also attended to

assisting students to improve the precision of their language and their work. Because

Alex engaged students in thinking and performing during even the beginning stages of

instruction, and required their thinking to be visible for purposes of formative assessment

and interactive instruction, student responses and comments needed to be clear and

accurate. The following excerpt from my field notes represents a typical instructional

exchange between Alex and his partner and the students:

> *Taking turns, Alex and Mr. Weir individually ask various students scattered throughout the room to restate, "using their own words," a particular rule from the manual. Several times, Alex pushes the students to remove the pronoun "it" and substitute the referent. He prompts students to make other improvements to clarity or accuracy, for example suggesting that they combine ideas or remove extraneous information. Interestingly, no student states any given rule exactly the same, students use their own words in place of those on the page, and no student shies away from Alex's suggestions.*

Alex offered clear directions to students, facilitating their active engagement in

learning activities. In part, clear directions were integral to a routine that he established

with the students. As classes often began with the starter story, or some other sharing,

Alex's mood and demeanor at the beginning of the class was most often relaxed, jovial,

and humorous. As he made the transition to large group instruction or the assignment of

tasks and small work groups, his tone became more serious and business like, thus

signaling the transition to students not simply with words, but with affect. Students, in

turn, became more serious and appeared to emotionally ready themselves for work. In the

general education math classes, he was very specific to tell students exactly what

materials they needed to prepare for the days activities.

> *Strolling among the students, Alex uses his fingers to count the items needed for today's lessons, "Okay, everyone, let's get ready for binomials. You need four things on your desk: One- Manual page 13, Two: A pencil. Three: A blank piece of paper to take notes. And four: a calculator or a multiplication table."*

Opportunities for Participation

During the course introduction and the establishment of behavioral expectations,

Alex announced that every student's active participation in all aspects of instruction was

expected and necessary for the success of all members of the class. The teachers and the

students frequently engaged in collective problem solving (whole class and small group).

Thus, the daily operation of the class served to make clear to students that participation and active engagement were indeed the norm. As mentioned previously, Alex facilitated student engagement in various types of discourse related to course content from the very beginning of instruction. During instruction, whether whole group or small group, participation was not dependent upon volunteering. Alex and his teaching partners posed questions to the entire group, asking students to identify procedural steps, perform the steps, make comments, predictions, offer a rationale, or take stances. After allowing time for students to formulate a response or to perform an operation and check with a partner or record their thinking in their notes, Alex would ask individual students to publicly share their thinking, regardless of whether or not they had volunteered. Over time, I noticed that students generally stopped raising their hands in response to teacher questions and simply readied themselves to respond. Alex was very careful that each student had frequent opportunities for participation during recitation, discussion, and practice activities. There were many days when I observed him or his teaching partner solicit information or request a particular response from each student in the class. Rick Weir told me that he and Alex intentionally worked on this and that "the students very quickly catch on that is a class where I have to contribute."

If students are to be motivated, they require both opportunities to be actively engaged in learning and steady encouragement and support (Good & Brophy, 2000). Whether in the larger co-taught classes or the smaller solo taught resource classes, Alex provided lots of opportunities for each student to actively participate. By calling on students who did not typically volunteer responses, Alex and his partners not only

promoted high levels of student attention, they also confirmed for all students that they could participate and be successful, even if they did not initially feel confident in the accuracy of their thoughts. Because Alex called on students who may or may not have known the "correct answer," his questioning demonstrated to students that he was more concerned with each individual student's thinking and understanding than he was with establishing a fact and moving through his lesson or agenda.

If students are required to publicly respond to teacher questions and otherwise share their thinking, as they were in each of Alex's classes, the classroom environment must be safe for taking such risks. Safety is in part achieved by providing effective scaffolds and other supports to help students be successful. The use of the manuals provided a rich resource and initial scaffold for students, particularly with respect to procedural knowledge. As Alex introduced new concepts and new algebraic operations, he demonstrated and prompted the use of the manual. Some students looked immediately to the manual when Alex or his partner posed a question or asked for a problem-solving step. Others who did not rely on the manual in the immediate situation, would refer to it after feedback or suggestions from Alex.

Safety is also enhanced when teachers respond to "incorrect answers" by acknowledging effort and offering prompts, clues, and suggestions that assist and motivate the student to try again (Mendler, 2001). When a student offered an incorrect solution, hesitated, or expressed confusion about how to proceed, Alex did not correct the response and move on, nor did he turn to another student. Instead, he quickly affirmed the student's effort and in offering feedback about the accuracy of the response, acknowledged that certain portions of the response were accurate or otherwise made

sense given the context. He then either asked an additional question or referred the student to the manual and offered specific and additional prompts to guide the student to reconsider and reformulate a response or to chose a different direction for their problem-solving attempt.

Facilitating high levels of student engagement and participation during lesson presentation and recitation allowed Alex to engage in formative assessment early on in the teaching and learning process. Formative assessment occurs when teachers acquire on-going information regarding student understanding and their ability to perform certain tasks. The information gleaned about the students is used re-adjust instruction and provide feedback to students in ways that enable them to address their own learning needs (Boston, 2002). When Alex provided feedback following a student's response, I frequently witnessed students express realization of their own errors by shaking their heads or slapping their desks as they moved to make corrections in their notes. I observed Alex watch students very carefully as they responded to his prompts or guiding questions. When students spoke hesitantly, displayed a furrowed brow, or somehow communicated a continued lack of understanding, Alex followed with a question in an attempt to pinpoint the cause of their confusion. The following interchange in the resource class typified Alex's responses to students' errors in thinking:

> Alex: "You are on the right track Bill, what about the decimal points and the ranking process?"
> Bill looks at his manual page. " I did, I ranked the numbers."
> Alex: "What about the decimal points?"
> Looking relieved, Bill responds, "I forgot to ignore them."
> Alex: "Okay, yes. Look at Step # 3. You have to ignore the decimal points, just consider them to be three-digit numbers here. Can you recall why we ignore them?
> Bill: When we factor, the order won't be right if we don't ignore them.

> *Alex: Yes, Yes, that's it. Don't be discouraged, we don't normally ignore decimal points, Your instincts were correct."*

Alex encouraged Bill to diagnose his own error by returning to the procedure outlined in the manual and then, assured that Bill understood at a conceptual level, by reviewing the rationale behind the procedure.

In requiring students to actively direct the problem solving sequences as outlined in the manual, asking pointed questions of students during the demonstration or lesson presentation phase of instruction and supporting their participation with encouragement, prompts, procedural clues, and other forms of scaffolds, Alex successfully created highly interactive lesson presentations. Despite the fact that interactive presentations were often conducted as whole group instruction, Alex was adept at providing differentiated prompts and assistance to students. Alex consistently made his thinking and his performance visible by thinking aloud as he worked at the board or at a student's desk. Facilitating student contributions, Alex also made the students' thinking explicit and visible. Alex consistently used information about student understanding to adjust instruction by altering the pace, looking for alternative approaches, or providing additional supports.

Scaffolding and Individual Assistance

In the Resource class Alex provided a great deal of assistance in helping students understand how to approach particular assignments or prepare for upcoming assessments due in their other subject area classes. Because students were working with materials, texts, and assignments that were not created by Alex, or that he had not modified in any way, some of the students struggled with determining what to do as well as how to complete various tasks. I watched as Alex frequently modified or adapted materials on the spot in an effort to help students determine important information, make sense of

complicated examples, or visually represent concepts that were typically available only through text and thus were not readily accessible to them.

Working with students side-by-side at a long table, Alex repeatedly created visual representations of ideas in the text, steps in approaching a task, or an explanation that he or a student had offered orally. He also attempted to connect ideas to what students might already know. Using blank sides of papers pulled from the recycling bin, he drew pictures to represent land formations, geometry concepts, or math story problems. He instructed students in creating time-lines and other graphic organizers to help them comprehend plot sequences, character sketches, and historical events. These "small blackboards" not only enhanced communication by offering visuals to accompany Alex's spoken words, they provided formidable resource support that students could refer to once Alex had moved on to help another student.

Perhaps more importantly, Alex actively engaged students to assist in the creation of these supports. He did this in two ways. First, he frequently made his own thinking explicit by "thinking aloud" with the students. Second, he required that students articulate their own thinking and visually represent or record it. By actively engaging students in devising learning strategies and in creating supports, students were able to later create similar supports and organizers. Helping a student with her unit questions for Geography, he had Beth read each question and identify the key concepts.

> *Alex began, "Okay, can you identify any words or phrases that represent main concepts?"*
> *Beth replied, "This question asks about 'plateaus'."*
> *"Okay, great, highlight that word. What about question number 2?"*
> *Beth: I think it's about climate?"*
> *"Anything more specific?"*
> *Beth: "Rainfall—like how much rain happens in different areas"*
> *"Okay highlight rainfall and amount," Alex replied, pointing to the words.*

Once they finished highlighting key concepts in each of the questions, Alex directed Beth to the index in the back of the textbook. Using the guidewords, they looked up the first concept. Before he instructed Beth to write down all the page numbers that appeared next to a given concept, he asked Beth for the range of pages that comprised Chapter 3, since the questions came from the review of that particular chapter. He instructed Beth to write the page number range at the top of the worksheet.

Beth replied, "Oh I get it, I only need to look to certain pages, since the other pages are for different chapters."

Alex then left Beth to writing down the page numbers and he moved back to helping Bill and Sam. Once Beth was finished with the page numbers, he returned to the chair next to her. "Okay, Question #1, now what do we need to know about plateaus?"

Looking carefully at the question, Beth replied, "Something about where they are and what they look like."

Alex: "Do you know what a plateau is?"

Beth replied, "I think it's like a mountain, no, it's flat, but I think it's high up."

Alex: "Okay, you're on to something, let's check. Let's look on the first page number you listed." After Beth turned to that page, Alex instructed her to skim the material to find the word plateau.

She found the word in bold font and struggled to read the sentence that contained the word plateau. "I sort of know what they are, but not where you might find one."

Alex suggested that they use the headings to determine where the term might be described and whether specific locations of plateaus were mentioned. Beth ran her finger along the headings on the page and Alex reminded her to not neglect figures and maps that appeared on the five pages in question. Beth quickly found a heading that she wanted, and said, "I think it will be in here." Alex then told her to use her finger to skim that section looking again for the word, plateau. Beth quickly found the information that she sought. She repeated it to Alex.

"Great, good detective work Beth. Now tell me what you want to write down in a sentence form." Beth began to read the sentence from the text. Alex challenged her, "Can you say it in your own words? That will help you to remember it later."

Beth smiled and paraphrased the sentence from the book.

Alex returned a broad smile and his eyes sparkled. His tone however, was serious as he affirmed her work, "Okay now you've got it, do the next three on your own, and then let's check your responses with Max. He did this yesterday."

A Beginning Scaffold for Instruction: The Math Manual

The math manual afforded a beginning scaffold for all students. It was, in effect, a

series of procedural facilitators, visual prompts, mnemonics, and reconstructive memory

aids. Scardamalia and Bereiter (1985) describe procedural facilitators as step-by step prompts that help students successfully complete tasks. The teachers actively demonstrated the use of the manual as new concepts were introduced and developed during whole-class instruction. As class began, they replicated manual pages on the chalkboard before they began the day's presentation and series of accompanying activities. With the contents of a particular manual page displayed on one panel of the chalkboard, Alex pointed to the first step as his partner read the step aloud to the class. Alex then performed the operations of the step as he verbalized his actions, actually applying the step to the problem. The next step was read and Alex followed by performing the step and the two teachers continued until the first model problem was solved.

Alex gradually turned the work over to students. He followed his initial demonstration with another sample problem, this time asking individual students to read the steps from the manual page. Alex then asked pointed questions to apply the directives to the sample problem, "The step says to multiply the first terms—which are the first?" Once a student identified the first terms, Alex underlined them. He requested that a student perform the multiplication, and asked another to direct him to the placement of the new term in the new equation. After Alex performed the step as directed, he asked another student to read the next step, asking more pointed questions that resulted in the student applying the step in the context of the sample problem and perform the directives as offered.

In the next instructional phase, one student was asked to read the step and this student or another one was asked to actually perform the step without Alex initially offering much help in the way of prompts or questions.

In the final phase of lesson presentation, the demonstration was completely turned over to the students, with Alex simply organizing their participation. After writing the final sample problem on the board, Alex asked, "Okay, Where do we begin?" As one student read the first step, another student performed the steps at the board. When a student stumbled, missed a step, or inaccurately applied a step, Alex quickly affirmed the student's effort and any part of their performance that was accurate and then followed with a question or restated a prompt that returned them to the accurate solution path. Students responded to such feedback, answering Alex's questions and re-doing pieces of the problem at their desks or at the board, often referring back to the manual as directed by Alex.

Without doubt, the teachers' modeling the use of the manual during initial problem solving and in error diagnosis contributed to students' utilization of the manual. I observed that most students actively and regularly used this beginning scaffold, particularly as new concepts and formulas were introduced. Many students referred less often to the manual as they developed competence and confidence in their independent skills, referencing it only after they encountered difficulties or in re-working a problem when a solution did not make sense. All of the students that I interviewed claimed that the manual was indeed a helpful and welcome support. Tammy expressed her experience with the Algebra Manual:

> We don't use it so much in Problem Solving but I think we should use it a little more than we do. But in Algebra we use it every day. They will tell us to get out

our manual pages and I think it is really helpful. They have everything written in detail and if you don't understand something, you can go to each step and it tells you how to get from point A to point B. And you also can understand why you should do something, why a step makes sense. The manual will get you to get the problem done right. And it is really easy to understand. I think the manual is really good for people that are behind because I think it helps them if they have something to read instead of just remembering what Mr. Morse or Mr. Kirchen said.

In essence, the manual provided an effective scaffold that did not rely on individual teacher assistance when students encountered difficulty. By providing it to everyone, and regularly demonstrating its use, Alex and his colleagues had differentiated the support that any student might have needed at any given moment. Because students were instructed from the very beginning in the use of the manual and because Alex and his teacher partners used the manual to introduce new concepts and to respond to students' questions, all students could successfully contribute and interact during the whole-group instruction time, something that the teachers expected of them. Explicit instruction in the use of the manual not only ensured that students knew how to use it when they needed it, but also communicated to students that using such reference material was acceptable.

The various math manuals were developed by considering the needs of low-achieving students and the required curriculum for each of the math courses. Using his own awareness about how students think, and likely errors in student's procedural knowledge (something I discuss later), Alex had developed a text that was both accessible and functional for students. Given the standardization of Algebra and Pre-Algebra curricula, these manuals could be produced and sold as texts for these particular subjects. I think that teachers and students would find them useful. If Alex were also to create an accompanying Teacher's Guide, it seems likely that other teachers and students

could benefit from the use of the Manuals in much the same way that Alex and his students benefited.

Enthusiasm for Subject Matter and the Work of Teaching

Much of the literature on effective teaching addresses the importance of teachers displaying high levels of enthusiasm for subject matter and instructional activities to induce intrinsic motivation in students. Showing enthusiasm for subject matter motivates students (Olson & Platt, 2004). Bettencourt and colleagues (1983) suggest that when teachers present material with enthusiasm they are communicating to students that the content is valuable and interesting and that students are likely to adopt a similar attitude. Good and Brophy (2000) maintain that the primary purpose of displaying enthusiasm is to encourage students to value the topic or activity, and "not to amuse, entertain or excite them" (p. 248). Although these assertions appear well founded and useful to improving teacher practice, my observations and experience with Alex Morse suggest that effective teachers display enthusiasm for more than just subject matter or instructional activities. Through watching Alex teach, I witnessed and came to understand that effective teachers demonstrate enthusiasm for all aspects of their work with students.

Each of the students that I spoke with talked about Alex's high energy level and his unwavering enthusiasm. Although Alex consistently demonstrated enthusiasm for the math, the instructional material, or the activity, he also demonstrated a dogged enthusiasm for teaching, for problem solving, for helping students overcome difficulties, for student displays of effort, and for student engagement and interest. In short, Alex's actions in the classroom effectively confirmed to students that he was enthusiastic and hopeful about them and about his work with them.

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One day, I entered the Problem Solving Class near the end of Alex's review of the previous night's homework. The following observation notes tracked Alex's requests for students to tell him about those "problems that presented difficulty to you."

> *When a student in the back corner asks that Alex demonstrate the solution to problem #4, Alex replies with great enthusiasm and genuine pleasure. "I'm glad that you asked about this one," Alex exclaims as he takes a few steps toward the student and then intently sweeps the room, making eye contact with each of the 19 students, one by one.*
> *Another student admits emphatically, "I cannot do <u>those</u>."*
> *Alex quickly whirls around to face the student and motions with a victory fist. "Good," he declares, not as an expression of praise for the student's lack of ability, but as affirmation for identifying an area of difficulty. He clarifies, "It is so important to know which of these are hard for us."*
> *With those words, several students scattered about the room voice their agreement with the difficulty of the problem type.*

As an observer, I noted Alex's adeptness at communicating to students that the class and the activities of the class were about the students, not about covering the content. He consistently displayed as much energy for their difficulties and their misunderstandings as he did for content itself.

Mark, one of the students in the Problem Solving class, talked about Alex's enthusiasm as contributing to his own motivation and success:

> I am a naturally motivated person to succeed but I think Mr. Morse showing such enthusiasm towards your succeeding helps a lot. To tell you the truth, I would probably be a lot less motivated if I was in a class where the teacher does not really care if you succeed or pass their class. But Mr. Morse seems to take that above one step. Not just doing the job and being paid but actually making sure that he is doing his job right.

Another student, Tammy, talked about Alex's enthusiasm toward teaching and the way in which he effectively communicated this to students. The comment from Tammy illustrated that she believed that she and other students benefited from Alex's enthusiasm

and that his zeal for helping students overcome difficulties was just as important as his

enthusiasm for the content that he taught. She explained:

> Mr. Morse is actually energized about helping students, with whatever. Not just
> the work, but the work too. I know someone who had problems and he helped
> them. And he was really excited about it. I have never had a teacher like that. I
> think more teachers should follow his lead as far as the way he acts and comes
> across to students. The impression that I get of him is that he is always happy and
> he never seems to have a bad day. I don't know why I think this is important, but I
> think that it is. Because teachers usually have bad days and like they always seem
> to have a bad day and are always complaining about not getting paid enough. It
> kind of gets repetitive and I get annoyed. But it seems like he never really
> complains. So I think more teachers should follow his actions. I think more
> should be more like him. He gets everybody in the class knowing what is going
> on and having fun doing it.

Erin expressed her awe at the uniqueness and effectiveness of her math class with Alex

and Kevin when she explained, "It is different. It is a different environment. I don't

know, how they interact with the kids and stuff. How they, they bring a sense of humor

into it."

When asked about her level of motivation for Algebra and whether Mr. Morse

(Alex) or Mr. Ward (Kevin) motivated her to succeed in class, Tammy shared her

thoughts:

> I am not really sure they do one thing to purposely get you motivated. But the fact
> that they are all excited kind of gets people to think it is fun. That is the way I
> think about it. My old math teachers, they would sit in a chair and run an
> overhead. They would never do anything like fun. They would make it boring. I
> guess it is kind of like the teachers, actually. Like Mr. Morse is always upbeat. He
> is always energized and that, kind of like, even if you are in a bad mood, some of
> the stuff he does is like really funny and you have to laugh and it puts you in a
> better mood. I guess when they are motivated it kind of makes everybody else
> motivated.

As I reviewed my observation notes, each entry included notes about Alex's

broad smile, cheerful affect, and his tremendous energy. From the greetings in the

hallway, to the lessons of the day, and the closing comments and goodbyes, Alex

displayed great enthusiasm. Even instances of minor student behavioral transgressions were met with an upbeat attitude and tenacious energy.

During one observation that took place early in the spring, students in the Pre-Algebra class co-taught by Alex and Kevin were reviewing for an upcoming test. Many students had been absent the previous day. The 90 minute class had been interrupted by a visiting student council member who talked to the students about getting involved in Habitat for Humanity. Instruction had also been delayed by a tornado drill. In addition, students appeared to be experiencing some of the first signs of spring fever, and motivation for review did not appear particularly high. Alex taught the entire period by himself because Kevin had gone home ill and the substitute teacher had not yet arrived. The following observation notes describe Alex's steadfast determination to remain upbeat in the face of many obstacles and challenges:

> *Following a short interaction with a passively defiant Frank, in which Alex had to firmly and directly request that Frank get a pencil from someone and complete the examples with the class, Alex returns to the sample problem at the board.*
> *Alex is in full swing. He energy level is high as he calls out to students to perform certain actions, praising their efforts or prodding for greater accuracy. With a model trinomial on the board he asks various students to review the characteristics of binomials, trinomials, and factors. He laughs at an intended wisecrack that Chuck makes to recover from an error. He encourages Frank, despite his apathy and lack of cooperation, by calling on him to participate at the very first and subtle sign of his engagement. He urges the students to make up for time lost to the tornado drill. He patiently listens and tries to better pinpoint Beth's misconceptions. He tirelessly offers yet another example of a trinomial with more than one negative integer, a problem type the students have struggled with for days.*

Even though I had observed Alex for countless hours over two years at this point in the study, I was still stunned with admiration for his level of enthusiasm and made a note to myself of the continuing effect his teaching had on me. I saw him as tireless. His

passion for teaching and for working with all of the students in the room was apparent in all that he did. The students' perceptions of Alex very much matched my perception of him. An enthusiastic individual by nature, he consistently displayed a great passion for the curriculum, the instructional activities, the school, and the students. Students often seemed to take their cues from Alex about how to respond to the day's activities. Newby (1991) found that when teachers present activities with enthusiasm, they communicate to the students that the activities are interesting, important and worthwhile, and that students adopted this same attitude. Given that most of the students in Alex's classes had not experienced high levels of success with the subject matter at hand, and thus were unlikely motivated by the content itself, Alex's ability to enhance student mood and thus increase engagement, in part by demonstrating enthusiasm for academic learning, but even more importantly for the students themselves, was critical to his effectiveness.

Accommodating Individual Student Needs

Although Alex was a strong whole-class instructor, he also was able to individualize instruction for diverse learners. Many of the students mentioned that the pictures and detailed visual representations provided by Alex enhanced their understanding and ability to work independently. Erin stressed that Alex not only demonstrated a variety of solution paths, but that he encouraged and allowed students to create novel solutions beyond what might be offered in his presentation. As she talked in our interview, I was reminded of a time in class when Mr. Eaton, a student teacher, had suggested rather detailed factor trees that simplified the process of factoring trinomials. Erin and some other students were able to successfully factor the equations with one or two steps. Erin offered the quicker process and Alex encouraged Mr. Eaton to display

Erin's solution on the board so "that we might all see Erin's thinking on this." Despite the

student teacher's initial request that all students complete the elaborate factor trees,

whether they needed to or not, Alex encouraged him to rethink his expectation. In an

effort to support Mr. Eaton's initial request and validate his thinking[3], Alex asked Mr.

Eaton if showing such detail might lead to partial credit in the case of an incorrect

solution. Mr. Eaton agreed that it should and the students concurred.

The above instructional exchange demonstrated to students that the teachers were

flexible and interested in accommodating individual differences. I witnessed many

similar exchanges about different approaches in each of Alex's classes. Erin provided

this observation in her own words:

> Everybody has a different way that they learn better. Some people learn by seeing
> it on the board, some people learn better by doing it themselves or whatever. And
> they put a variety in so matter what your learning ability is bettered with,
> everybody is going to learn because they use all these different ways of teaching.
> And even though they have a way that they know will work, Mr. Morse thinks
> that it is important for us to use our own ways. He might think it would be more
> sure for us all to do it one way, like the long way, but he wants us to, to decide
> what we need and then he'll be there to help. So I think that is good.

In the co-taught math courses, each student had a procedural scaffold in the

manual. Its very design helped students to determine important information and to use a

set of actions for a variety of mathematical equations and general problem solving. All

assignments and instructional materials were teacher developed (primarily by Alex), so

that the need for modifications or additional assistance in understanding how to approach

the work was most often unnecessary. Of course, some students required individual

assistance and additional scaffolding as they engaged with independent "seat work,"

particularly in building conceptual understanding. As students worked individually or in

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[3] When I asked Alex later why he had asked Mr. Eaton about partial credit, Alex explained that he did it in
order not to undermine Mr. Eaton's authority with the students.

small groups to practice the lessons of the day, Alex systematically circulated through the sea of desks, clipboard and pencil in hand, carefully looking at student work and listening to student conversations. Working the crowd in such a manner, Alex closely assessed student work and addressed misconceptions and misunderstandings by offering individual instruction on the spot or by bringing the whole group back together when many students seemed to be struggling with similar procedures or concepts.

When offering individuals or small groups additional instruction during independent seatwork, Alex most typically re-wrote a problem or portion of the problem on a blank piece of paper affixed to his clipboard. Kneeling at a student's desk or seated in a nearby desk, he prompted individuals to refer to the manual and worked with them to perform particular steps outlined there. As students read steps from the manual pages and verbally performed the designated actions, Alex recorded their performance and applied it to the problem he had written on the clipboard. In this way, students generally recognized their errors and quickly determined where or why their solution path had diverged and were able to continue from that point. Leaving this slip of paper with the student and with a final word of strong encouragement to the students, Alex moved on, looking over another student's shoulder or listening to pairs of students as they worked collaboratively.

In the resource room, I frequently observed Alex to work with individual students on various language arts and social studies assignments that required a great deal of writing. Typically, Alex provided support to these students by engaging them in discourse related to questions or topics offered in the assignment. Although I observed that many of the students were quite capable at verbally responding to comprehension

questions offered for works of literature or at narrating ideas for short essays, most students in the resource class struggled with expressing their thoughts in writing. Through brief dialogues, Alex helped individual students organize their ideas and bring clarity to their thinking by asking pertinent questions, recording notes, identifying confusing or conflicting statements, and making specific suggestions about wording. Finally, Alex summarized the students' thoughts and required that they offer exact statements, which he then recorded on a clean scrap piece of paper. Once the students' statements were recorded by Alex, the students would then copy these onto their own paper or use the word processor for longer writing assignments.

In the co-taught math classes, Alex and his teaching partners most often adapted the level of difficulty of the assignments by providing the procedural facilitators contained in the math manual, shortening the assignments for certain students, allowing the use of calculators, and offering individualized assistance. Because the text, assignments, and tests were created (primarily by Alex) with individual students' needs in mind, the level of difficulty of the instruction and the assignments were matched to meet the needs of the majority of the students. It appeared that Alex and his partners were able to modify instruction for students who continued to struggle by offering the types of supports identified above. Because the range of student achievement varied widely in these math classes, it was important to consider the students who did not struggle. In the co-taught math classes, I did not observe much in the way of differentiated instructional activities--by either readiness level, or by interest. The 25 or so students in any of the three co-taught classes of Pre-Algebra, Algebra, or Problem Solving, all completed the same type of problems and for the most part, the same number of problems. Students who

appeared to be performing at mastery levels were required to complete the entire problem set, the level of difficulty was the same as for those students who appeared to be performing at beginning levels and who demonstrated little proficiency with the content. There was no evidence that students who were proficient with the content were expected to perform at increasingly advanced levels. Indeed, the classes were designed to accommodate students who struggled with math. Given that the students at Roosevelt were tracked by ability level, the students in the co-taught classes (Tech Prep Track) were students who had struggled with math previously, at least relative to the rest of the student body. Based on my observations, three or four students in every one of the co-taught classes appeared highly competent with the material and I wondered whether their abilities were nurtured and challenged, as I watched them zip through the same work as the rest of the class.

I reminded myself, and I remind the reader, that competence with subject matter is only part of the equation for school success. Some of these same students who demonstrated mastery were also students who struggled with regular attendance, motivation to be engaged and perform, and emotional or health issues that impacted their school performance. Without doubt, the elements of effective instruction that I observed and attempt to describe throughout this study, played a role in the classroom success of these students. Alex and his partners appeared to meet the needs of the majority of the students and obviously they promoted the engagement of these students who presently appeared highly competent with subject matter, but who had failed the same course with different teachers in years before. Based on the performance that I saw from some of the

students, perhaps Alex and his partners might have done more to provide enrichment, to challenge students who demonstrated advanced skills.

I was able to talk with some of these students and several agreed that they were not challenged by the activities of the class. They were, however, passing, which was not something they had accomplished with earlier efforts of the course. I interviewed Erin, one of the students in the Algebra class who consistently completed practice sets and tests with 100% accuracy. I asked her how she experienced the teachers' attention to every little detail, (something she had said previously) and if such attention to making sure that all students were able to understand hampered her progress. Given that she seemed capable of grasping concepts and algorithms quickly and accurately without much assistance, it seemed that she might be bored with the repetitive and sometime slow pace needed for her less competent peers. She explained that she was able to "adjust" by "working ahead." Her comments were consistent with my observations of her work strategy.

Sam, a student with a chronic illness and identified for special education services, had much to say about the many ways in which Alex supported him to succeed. Although he claimed that the co-taught class with Alex and Rick was "kind of challenging, a little," he also hesitantly shared that he felt that class was too easy for him. Perhaps because he liked Alex and did not want to seem critical of him, Sam said guardedly:

> I really don't want to say this, but if you were a student I would say these classes are so easy and everything. Not easy, but you learn the stuff and you don't get a bunch of homework and everything, like every night. You do the work in class. It's easy.

The Problem Solving course was a remedial course intended to prepare students to pass the mathematics portion of the state mandated 10th grade graduation qualifying

examination, the Indiana Statewide testing for Educational Progress Plus (ISTEP+).

Students were assigned to the class after having failed the math portion of the 8th grade

ISTEP+ or the math portion of the 10th grade test. (Students could re-take each of the

portions of the 10th grade test several times). Although I do not have data about the

percentage of Alex's students that had passed or had not passed the 10th grade

mathematics portion of the test, students at Roosevelt have consistently performed above

the state average in mathematics. Students with disabilities, a large portion of whom were

probably included in the classes that Alex co-teaches, have not fared as well. Math

passing rates for students with disabilities at Roosevelt fluctuated between 29% and 33%

for the academic years between 2001 and 2004. Although these rates need to be

improved, the 2004 passing percentages for Roosevelt students with disabilities were

above the state average and the students had met adequate yearly progress. Again, I did

not have data specific to the students in the classes taught by Alex and his partners.

Despite the intended purpose of the Problem Solving course, I saw little evidence

of focused instruction that addressed specific skill deficits of individual students. As I

have described earlier, the bulk of instruction was whole-class instruction. When

interviewing students, if they mentioned their failure to pass the ISTEP+, I asked students

about specific scores or weaknesses in specific skills. None of the students were able to

tell me how close they were to passing, to pinpoint specific types of skills in which they

were weak, or provide any information contained in the individual student reports that

each student received from the testing company. When I asked Alex how many students

in the Problem Solving class had passed the math portion of the 10th grade test during the

fall administration, he estimated a number but admitted that he was not sure who had

passed or who had not. I did not explore this issue in enough detail to make many claims about whether Alex's classes provided sufficient remediation for certain students' deficiencies. Effective remediation requires that students and teachers are aware of specific skill weaknesses and that students receive focused instruction in areas in which they are weak. Good remediation also requires that students and teachers regularly monitor progress toward learning goals. Because my study was focused on a teacher and not on a set of students, I cannot make claims about whether specific needs were being met in the most effective way. However, I did observe the majority of students to be actively engaged in the activities of the various co-taught classes. I also have a general sense that the group strategies were sufficient for improving the math skills of most of these students, based on their performance with the instructional activities, including independent work.

Teacher attention

Berliner (1992) proposes that expert teachers are sensitive to task demands as well as the social situation when solving instructional problems. They incorporate knowledge about the physical and social environment in which instruction is to take place. Highly effective teachers recognize often subtle social cues produced by students and often change instruction in response to these cues. They frequently make judgments about student involvement, student enjoyment and student understanding and as they interpret moods and feelings of their students. They then use such information to adjust their actions and activities within the classroom (Berliner (1986). Similarly, in defining his concept of "with-it-ness," Kounin (1970) suggested that effective classroom management is achieved by teachers who are acutely aware of all that is happening in the classroom

and are also able and willing to take swift actions that remedy problems that might lead to serious behavioral difficulties if left unchecked.

In short, I think that both Kounin and Berliner were describing teachers who had a heightened sensitivity to the dynamics of the classroom and to students' needs as individuals and as a community of learners. This sensitivity combined with actions that incorporate such knowledge into arranging or rearranging the physical space, the instructional activities, or social interactions likely form the foundation for responsive and considerate instruction. Alex's reputation as an effective teacher undoubtedly stems from his heightened sensitivity and his ability to act on such information, his general with-it-ness to group dynamics.

To be acutely aware of the social and task demands, student enjoyment, frustration, understanding, and the like, teachers must move throughout the room, stand in close proximity to students and their work, and be able to attend to more than what they are immediately involved in any given moment. I observed that Alex was very adept at arranging physical spaces, moving throughout the room, and attending to several tasks at one time.

The Pre-Algebra classes were overcrowded with student desks—seven rows of five desks with no space at the end of each row. A narrow aisle led from the door at the right rear, separating the first row of student desks from a student computer against the right wall. A bookcase, short filing cabinet, small worktable and a teacher's desk with a computer occupied the front half of the left side on the room. Another table sat to the right of center and two tall filing cabinets were in the front right corner of the room. Whichever teacher presented material worked from the table just to the right of center,

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moving between materials placed on this table and the board. I noted that students who appeared to be highly active and in need of frequent teacher re-direction often sat in the front desks or near the right side of the room. This seemed to be the case for all the math classes and even in the larger room where the Problem Solving Class met. Alex had placed these students there so that he had easier access to them when he needed to be near the board, occupied with whole-group instruction.

I quickly noted during my observations, that regardless of which co-teachers Alex worked with, Alex moved about the room better than any of his teaching partners When Alex was not directing lessons from the board, he most often remained at the end of one of the rows or off to one side, frequently changing locations as his teaching partner transitioned from one example to the next. As Alex moved about the room during large-group instruction he was keenly aware of what students were doing, which students were completing parts of the examples as instructed, which students appeared stuck or had difficulty in keeping up. Frequently, Alex directed the problem solving process from a vantage point that allowed him to observe students carefully while his partner teacher displayed problems at the board, as Alex read the steps from the manual. As Alex interpreted student progress, he often suggested to his teaching partner that they move more quickly or revisit a particular concept, or asked a pointed question to a student or to the whole class in an attempt to address difficulties. When his partner teacher led instruction from the board, Alex effortlessly and subtly moved to students who appeared to be struggling and offered quiet, individualized assistance that enabled the student to re-join the large-group instruction.

Alex and Rick, both sports fanatics, had created a system of working the room similar to that of "basketball referees." Alex explained that they had figured out that the teacher not at the board was more aware of where instruction needed to move because of being able to attend more closely to students' level of understanding. Initially, the "floating" teacher simply moved to the board and co-instructed with the teacher already at the board. Alex reported that this method had proved to be ineffective. In an effort to determine why, he conjectured that when he and Rick addressed the students from the front of the room and shared the main activities of instruction, students seemed confused, or overloaded, in terms of where to direct their attention. Rick and Alex solved this problem by using the "one up, one back" referee strategy for placement on the court. If one of the teachers felt a need to be at the board to lead the large group instruction, that teacher would simply move to the board, and the other would drop back and take the role of keen observer, perhaps offering suggestions and directives to the person at the board. I watched Rick and Alex seamlessly make such transitions, as one took over at the board and the other dropped back. This procedure allowed students to retain their focus on the visuals at the board.

When students worked at their desks, Alex moved throughout the room, stepping over book bags as he walked down the aisles, looking on as students worked, offering encouragement to students with a hand on their shoulder and quiet praise for effort, progress, or success with certain problems. When he noticed mistakes, he directed students' attention to their work, asking a question or suggesting a step outlined in the manual. Frequently he wrote a portion of the problem on blank paper affixed to his clipboard, prompted students' in the use of the manual, and recorded the students'

calculations as they responded to directives offered in the manual. Once students were back on the right solution path, Alex offered positive feedback and left the paper with them to record the guided problem solving on their own paper. Rick Weir, his partner for several years for both Algebra and Pre-algebra, relayed to me an explanation he offered to the students regarding his style of sitting at the front desk as students worked and Alex's style of moving among the students and interacting with them as they worked. Rick recalled,

> I just told them, Mr. Morse is the bookmobile and I'm the library. If you want my help, I'm here. You can come to me. If you want Mr. Morse's help, he'll be around, he'll come to you.

> Several students noted Alex's keen awareness about the happenings in the classroom. Andy, a student in Ted and Alex's Algebra class, commented that the two teachers, but especially Alex, offered lots of attention to students, "sometimes when you don't want it." On many occasions I had observed Andy to respond to Alex's requests to attend (to lift his head off the desk, to copy notes, to get out his work) with eye rolling, scowls, heavy sighs and other quiet displays of annoyance. However, in the interview Andy hinted that he appreciated such attention. He explained:

> You don't feel like you're in trouble or that Mr. Morse's nagging is this huge thing, but they're gonna bug ya'. That's how it is, one of them is up there and the other one's checkin' everyone out, goin' around to peoples' desks, telling people to get with it. And it's usually him [Alex].

Andy added that while at the moment he often disliked the attention he received from Alex, he also laughed aloud when I shared my observations of Andy's reactions to Alex. He suggested that without the "nagging" and reminders from Alex that he might fail the class again. He was taking Algebra after failing the required course the year prior with another teacher. My observations of Andy in the classroom indicated that he was a very

capable, yet sometimes disengaged, student. When Andy used the class time for math

work, he usually finished in the time allotted without apparent difficulty. His

participation reflected good conceptual and procedural understanding of the algebra.

Andy easily convinced me that he had failed the class previously because he had "slacked

off," that he "just didn't do the work," not because he "couldn't do it." While Andy did

not explicitly attribute his past failure or his present success to any teacher, it was clear to

me that Alex and his partner teacher were providing the attention and support that Andy

appeared to need to put forth the effort that he had claimed was missing in the prior

Algebra class.

The personal contact that Alex made with each student everyday afforded him a

quick opportunity to discern students' moods, check on their progress, and also learn

about social relationships among the students. His very quick checks of student

homework provided him with vital information regarding the need to re-teach or revisit

particular concepts and problem types to eliminate particular error patterns.

Alex purposely arranged the resource room to facilitate his being aware of

students' activities as students worked together in small groups or alone. His arrangement

of the space also allowed him quick access to students in order that he might provide

brief individualized assistance. One long table with chairs on both sides and at each end

occupied most of the small room, another smaller table was at one side, and six carrels

were placed at the rear. A computer and small work area sat to the right of Alex's desk.

His desk held stacks of textbooks, other reference books, the day's newspaper, and

assorted instructional materials. I never observed Alex sit at this desk, instead he sat in a

rolling chair at the long table with the students, generally sitting between the four to five

students that needed the most intense teacher guidance and scoot around to provide assistance to others at any particular moment. Students frequently changed places as temporary work groups formed or as teacher assistance demanded.

The chalkboards on both sides of the room contained the week's lists of work to be completed. These neatly arranged by subject area, teacher, and students. Under Geography-Wilson, three assignments were listed with the names Beth and Max to the right of each assignment. Their names had been crossed off for two of the assignments. Geography-Sims was written in similar way with two of the same assignments and one different assignment listed underneath. Ann's name appeared after these and was crossed off for only one. Chemistry-Madden listed four assignments and Sam's name appeared after each, crossed off for two. The boards were full, but very efficiently organized. Although Alex and the students shared responsibility for creating and keeping the lists updated, Alex had also created a simple system in which teachers for the various classes would send him a form listing the week's assignments. Visually displaying these lists on the board served to help students with self-management and planning but also assisted Alex in organizing the student work in the resource room.

The following excerpt from my observation notes reflects Alex's attention to the multiple tasks and activities that typically took place during the resource period:

> *Max is at the computer, working on his own Web page; something assigned in his Computer/English class. Sam, seated across from Alex at the long table, repeatedly leaves his chair and looks on as Max adds various graphics.*
> *Very quietly, as Sam again starts back to the computer, Alex says, "Sam, get another look and then tell yourself to get to your own work. You can sit with Max after our break, when you've finished those Chapter 9 questions."*
> *Sam sits back down and after looking at Max, and reluctantly retrieves a worksheet from his binder.*
> *Brandon sits at the end of the table looking at a paper that he holds in front of him. As I am sitting closest to Brandon, I ask him what he is working on*

and he informs me that he is studying for a test. I quietly suggest to him that he might study by quizzing himself as opposed to reading from the paper and I offer to help.

Alex, working with Bill, perks up, and with a sly smile warns me that I "better watch out." I sense that there has already been an interaction between Alex and Brandon and this is Alex's way of protecting both Brandon and me from a similar interaction. Brandon seems particularly sullen today. I smile at Brandon and move back to my notebook.

Alex, seated next to Bill, talks him through the steps of an algebra problem. They are working in a traditional textbook used in the Algebra II classes. Though Bill had Alex as teacher last year in an Algebra class that utilized the Algebra Manual instead of a traditional text, there is no manual for Algebra II. Alex has analyzed the tasks necessary for various algebraic equations and attempts to walk Bill through these steps, much as I have seen with the use of the Manual. Alex alternately offers the step, asking Bill to perform the operation and then asks Bill to chose the next step and perform the operation.

As Bill writes, Alex looks over his glasses to the two girls who are supposed to be working together to study vocabulary words. I look too and it appears that they are chatting about things outside of the vocabulary tasks. Rory is excitedly but very quietly talking to Beth.

He quietly inquires, "Rory, what are you working on?" When Rory doesn't respond, he suggests that she tutor Beth. He reminds Beth and Rory, "Let's make sure that you can each say these words, not just recognize them as matching a definition."

Rory stares blankly at Alex, with her chin down, mocking Alex looking over his glasses, seeming unconvinced that this is a good idea. Beth quickly grabs the cards and arranges the cards that contain the definitions face up on the table in neat rows. She hands another stack to Rory.

Alex quietly responds to Beth with a big smile, thanking her "for her lack of negative energy." Rory rolls her eyes in an exaggerated fashion and smiles at Alex as she takes the cards from Beth.

Alex quickly responds, "Thank you Rory, way to get to it." Alex swiftly looks back to Bill's progress and prompts a step that he had neglected.

In the resource room, Alex adeptly kept track of the activities of ten to twelve students. He had established a close community, encouraging the students to work collaboratively and demonstrated a keen awareness of when to push students, when to leave students to their own methods, when to offer strategies and directives for their use, and when students needed close supervision and assistance. One time I marveled at his ability to stay on top of the activities that needed to happen and to organize students so

efficiently, Alex humbly explained that he had a "great group of young people, an amazing group of students" who were responsive to his instructions and guidance. Alex's Resource class was a very busy place, much busier that other Resource classes I have sat in, including my own.

Being sensitive to task demands involves teachers' ability to think about student thought and performance. Berliner (1992) suggested that expert teachers know a lot about how students think, and how student thinking might interact with the content and processes of particular lessons. They are also are able to think through the lessons, understand the thoughts that students might have, including potential errors in thinking. They then incorporate such knowledge into their lesson planning and delivery. Berliner claims that expert mathematic teachers are able to predict students' potential errors in thinking, having a great fund of knowledge of "*mis*algorythims" that learners are likely to apply.

Alex often considered student thinking, forecasted their difficulties and attempted to proactively respond to potential difficulties. Many times I observed him predict the errors that students were likely to make, and review a representative problem type on the board, often noting the commonly occurring "misalgorithms." Alex had developed the math manual by considering how students were likely to interact with the material, their thought processes, and their likely mistakes. Certain pages of the manual drew attention to likely trouble spots, or anomalies, and the manual offered an alternative algorithm. In addition to preparing for students' potential errors in thinking, Alex effectively acknowledged to students that these errors appeared logical and made sense to him. Scenes similar to the following were frequently documented in my observation notes:

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"Mr. Weir, let's do one more. Let's do one with a negative variable and negative integer."

Rick carefully writes the problem on the board.

In this particular instance, the pre-algebra group is working through problems that included a slight twist on a previous applied algorithm, problems that pose high potential for mistakes. In the instructional scene that follows, the class members work together.

Alex asks a particular student to read the problem on the board and the student complies. From there, Alex leads several students individually to identify the steps to be performed, always using an additional question if students become stuck or to move the task forward.

"Where should we begin? (pause) Todd?" Alex asks.

"Get the variable by itself," replies Todd.

Alex says to the class, "Why?"

Toby shouts, "We can't have anything multiplying or adding to the unknown, we can't figure out what exactly it is unless we get all the stuff to the other side."

Alex responds, "That's it Toby. How do we isolate the variable? (pause) Martzia?"

"Do the opposite," Martzia answers.

Sam adds, "And then we do it again on the other side, we can't just get rid of the 4."

Alex: "What is the effect of performing an opposite operation? (pause) Greg?"

Greg: "It takes away whatever is being divided or whatever and moves it to the other side and then we multiply over there."

"Great, now let's get more specific, let's talk about this problem. What is being done to the variable? (pause) Adam?" Alex prods.

Adam: "Divided by four."

"Yes, and what would be the opposite operation? (pause) Adam?"

"Times by four," Adam adds.

Alex's pleasure is uncontainable. He shakes a clenched fist as he says with great sincerity. "Okay, now we're on to it. Emily, what happens when . . .?"

Alex continues to lead the students through the problem, asking, questioning, with Mr. Weir performing the actions specified by the students. Once the variable is solved, Alex interjects again, "Look out." This prompted Rick, and he directed a student, Jerry, to read the Manual notes that followed the "look out" message." Many students appeared to read the notes quietly to themselves or looked at the words as Jerry read them aloud. Alex then asks if the variable was being multiplied or divided by a negative number, the condition noted in the rule.

Several students respond, "Yes."

One of the young men argues, "But the variable isn't really being multiplied or divided because the operations cancel each other."

Alex looks directly at this student, nodding empathetically, and says, "Yes, it looks that way, yes, I see that. Let's look more carefully at the rule, the

condition, and the order of the steps. "Mr. Weir can you help us out? Because Ted has a valid point here"

Rick says that the condition must be assessed before problem solving begins, that is, before the operations cancel each other in this particular problem. Therefore, Rick quickly concludes, the condition is met.

Alex attempts to clarify, "So before we start to manipulate the equation, before we make any changes, we look for negative numbers in applying the rule. Why before, what difference does it make?"

Several of the students look at Alex with quizzical type looks. Several hands slowly rise. Alex looks around the room and calls on Erin, whose hand is not raised. Erin says, "Well, once you start canceling, you are changing the problem. I think whoever figured out the rule, figured out that it works on equations as they are, it is a rule to help with the negative numbers being there in the first place. Getting rid of the negative numbers does not allow you to apply the rule, which seems to be the only way to solve the problem."

Greg adds, "It's more than that, it's because of how we do the canceling, it the whole two negatives make a positive.

Alex adds, "Okay, these ideas make sense. So when do we decide whether the variable is being divided or multiplied by a negative number?

A few mumbles from the class.

Alex tries again. "When do we decide whether the variable is being divided or multiplied by a negative number, before or after we cancel?"

The students respond in unison, "Before"

"Yours is a logical argument, Ted. This will trip us up. Make the decision about the negative number before we cancel, before we make changes to the original problem."

Alex and his partners carefully choose sample problems, which they consistently referred to as Model #1, Model #2, Model #3 and so on, that were representative of all the types of problems or tasks that appeared in the work that students were expected to complete individually or in small groups. Because Alex created the text, samples, and problem sets for independent work, and did not rely on commercially prepared materials, he was able to purposely attend to common errors that students might make. Having collected most of the problem sets, I systematically grouped the problems by type and looked to see if the problem types were represented in the examples that Alex and his partners displayed on the board to prompt students through in large group instruction.

With few exceptions, all problem types that appeared in the problem sets offered for independent work were represented as examples during guided practice.

Summary

Part of Alex's abilities to engage students academically can be attributed to his knowledge of content. He had received subject matter preparation equivalent to other secondary math general educators. In addition, special education preparation provided some knowledge of specific instructional supports, how to adapt instruction, and how to scaffold and adapt materials and pedagogy for individual students. On top of academic preparation, Alex's extensive experience and commitment of time and energy contributed to the development of subject matter expertise and individualization within math and other content areas. He was committed to think deeply about his teaching, to purposefully reflect with partners and colleagues, including his wife. Alex used such knowledge to develop effective curricula, including text and other instructional materials. In so doing, Alex connected mathematical concepts to real-life problems, problems that were relevant to the lives of adolescents.

Alex realized that part of effective instruction involved getting students ready to participate and connected to the activities of the classroom by making personalized contact with each student at the start of class. In addition, in sharing interesting narratives that were of interest to the students, Alex readied the students for upcoming activities by activating skills of listening, predicting, thinking, and participating. This brief sharing also appeared to enhance the general mood of the class, thereby increasing student interest and engagement.

Alex organized highly interactive instruction and promoted high levels of student involvement by structuring multiple opportunities for participation while providing encouragement and support in the form of instructional scaffolds. He and his partners created an environment that was safe for taking intellectual risks by making interaction routine and responding to student comments with prompts and affirmation of successful approximations. Alex was very adept at communicating clearly and used a variety of instructional modalities to promote student understanding of task requirements, and procedural and conceptual knowledge. He consistently offered explanations that combined written text, oral clarification, and graphic or visual representations of relationships among concepts.

Students received a great deal of individualized assistance from Alex in both the Resource course and the larger general education math courses. Procedural facilitators were embedded in materials he developed for the math courses and he assisted students in creating such facilitators when none were offered for tasks required from other courses. He provided differentiated scaffolding during whole-group instruction and independent seatwork, and assisted students to learn and apply specific learning strategies during performance activities. Regardless of the tasks before them, students experienced lots of support from Alex.

Alex persistently demonstrated high levels of enthusiasm for his work and for the students he taught. Students experienced such enthusiasm as responsible for increased motivation on their part and were most impressed with Alex's dogged enthusiasm for helping them to succeed and his eagerness and willingness to address student difficulties.

While Alex developed instructional materials that matched student skill levels, provided effective instructional scaffolds, and assisted students in using specific learning strategies, the whole group instruction that dominated the general education math classes posed problems. I saw little evidence that individual student needs were accommodated beyond offering students some flexibility in how they approached a given task. By and large, Alex and his partner teachers organized instruction and designated student performance activities according to general course objectives geared toward the entire group. Instruction and tasks were not differentiated to address varying readiness levels, at least for students who demonstrated competence or quick comprehension of concepts. Likewise, there was no evidence that Alex and his teachers addressed individual student skill deficits as identified through student performance on the state mandated standardized test (ISTEP+).

Alex was acutely aware of the activities of the classroom, as he simultaneously observed and made sense of his observations to effectively respond to such activities in a way that kept instruction flowing and students engaged. His constant and on-going monitoring of student understanding and involvement allowed him to make quick decisions regarding the direction of instruction and need for individualized assistance and interventions. In developing instructional materials and performance tasks, Alex accounted for students thinking and attempted to prevent common errors in applying procedures and to address common misperceptions in conceptual understanding. As mentioned above, Alex appeared to adjust instruction and adapt performance tasks almost exclusively for those students who struggled. Accommodations and adjustment for students who did not struggle appeared few and very limited.

Chapter 5

CREATING AN ENVIRONMENT OF CARING RELATIONS

The development of close interpersonal relationships between students and teachers lays the groundwork for effective instruction. For students who struggle with school, such relationships are vital. Students who have experienced repeated failure in school frequently lack healthy self-concepts and confidence. Often these students are not willing to take risks and do not perceive schools as places of care and support. Teachers are positioned to provide instruction and interactions that can improve students' confidence levels by developing caring and supportive relationships with them and facilitating similar relationships among the students. If educators are to create environments that are conducive to learning, they must create environments based on care.

Alex was well aware of the need to create caring classroom relationships and he expended great efforts to develop caring and supportive relationships with students. In this chapter, I discuss some of Alex's dispositions and various ways in which he demonstrated care and respect for students by attending to their affective needs and to their development of social-emotional skills.

Liking Students

Certain key teacher attitudes, such as teachers liking and respecting their students as individuals, appear related to effective and responsive instruction (Good and Brophy, 2000). These personal qualities are basic to successful teaching because they allow the teacher to become someone the students care about and respect, thereby increasing student motivation and engagement.

Given that teaching undoubtedly involves working intimately with others, it follows that exemplary teachers generally like people and specifically like the students with whom they work (Berliner, 1992). Alex Morse is someone who likes people. His personable nature was quickly apparent, even upon a first meeting. Once, Alex participated in a panel presentation for a summer workshop that I also attended. Following the presentation, I heard many of the participants talking with one another about Alex's amiable and affable nature. My experience has taught me that it was likely that Alex was perceived as likeable because he consistently demonstrated his own general liking of people.

Not only does Alex generally like people, he particularly enjoys students and has a genuine interest in working with young people. One of the first times that we met, Alex expressed his sentiment in an interview:

> On an everyday basis, I do like working with young people. I work better with young people than I do with my own peers. And I think that's one of the reasons why I like teaching.

Alex communicated his enjoyment of young people through his daily interactions and actions within the classroom. His constant smile and genuine enthusiasm that I described in the previous chapter demonstrated this enjoyment to young people.

Coming to Know Students

Teachers must make an effort to get to know students individually (McCaslin & Good, 1996). Teacher knowledge of students' interests, strengths, and difficulties in both the academic and social arenas impacts not only the teacher's ability to plan effective and individualized instruction, but also affects a teacher's ability to promote student

motivation and to create a caring and supportive environment that is conducive to learning and growing (Griffin, 1988).

Alex viewed students as dynamic and changing, and thus saw limited utility in reviewing information about his students' past that might be found in their cumulative record. He noted that he would look at students' Individualized Education Programs (IEP's) to determine yearly goals and objectives and to become aware of important information, such as medications or family situations, but that he was careful to not let previous performance evaluations (academic or behavioral) determine his expectations for students. He shared with me his thinking that student performance was affected by many variables, especially contextual factors within the classroom. "What a student did last year in Mrs. Whoever's class may or may not be repeated in our classroom," Alex explained. He added that students performed differently in different social contexts, given different teachers and different classroom environments. When asked about how he came to understand student's individualized needs, particularly of those students identified for special education services, Alex replied:

> I read the IEP, but I don't think of students in terms of percentiles of verbal reasoning and all that stuff. Because I feel that the student is a dynamic person and I want to deal with them today, here in this class, where they're at right now, as opposed to where they tested at one specific time six months ago. And I can get a good feel for them really quickly, mostly be doing some simple pre-assessments and asking students to self-assess their strengths, interests, and difficulties. And then I'll tailor my teaching based on what I perceive would help them the most.

According to Alex, part of getting to know students involved considering how his own actions in the different classrooms might impact students' performance. Alex shared the questions that he asks himself:

> Can I motivate them? Can I get them interested? Can I get them to see a task from beginning to end? Can I get them to obtain a sense of quality? Can I make them

feel comfortable? Can I help them to remember assignments and get things back to school? Can I connect to them and then help them to connect to the content in a way that makes them want to look deeper? Can I engage them to set some personal learning goals?

Instead of relying solely on formal information about students, Alex often began his work with individual students by using informal assessment measures to gain ideas about them in order to plan academic instruction. He employed curriculum-based measures to pre-assess their current level of understanding. Alex used information to pair students for work groups and to make decisions about calling on students during early stages of interactive instruction. Through keen observations, he also attempted to understand students' social strengths and weaknesses. In making personalized connections to each student, he continually tried to learn more about their lives in and out of school, including interests, employment history, affiliations, goals, dreams, friends, and family arrangements. He used such knowledge about students to initiate conversation with them throughout the year and often made students aware of things they had in common with each other. In addition, he made frequent connections between instructional content and their lives and interests. He demonstrated to students, from day one, that he had a genuine interest in knowing about them as young people and as learners.

Students' Responses to Alex's Relationship Building

In interviews with students, each student mentioned that Alex was a unique teacher in his attention to making personal connections with students and in expressing interest in them as individuals. Mark, an articulate senior in the problem solving class, had been in two different classes with Alex Morse. When asked about specific things that Mr. Morse did that either helped or hindered his understanding of math, Mark responded,

It just seems to me that he really, really cares. And I think he is pretty up-to-date with the way students are nowadays and I think that is a good thing to have. If a teacher can connect with the students, then he will be an even better teacher than what he is now, if he can connect with the students. And Mr. Morse connects with students. And from my experience, having him in two classes, all of the students seem to pretty much care for him as a teacher. . . . Hindered? I can't really think of anything. Mr. Morse doesn't do anything that turns me off to math or that makes it hard to understand.

Interestingly, although Mark had begun by pointing to Alex's clarity of presentation, his use of examples, and engagement of students, he quickly shifted to the personal connectedness that he experienced with Alex. Mark viewed Alex's care and connection to the students as critical to helping students understand the material. Like other students, Mark viewed the academic support provided by Alex as a prime indicator of his concern and care for students. In addition, Mark's mention that students care for Alex Morse "as a teacher" appeared an important part of Alex's connection to students.

Chuck, a junior in the Algebra class, indicated that Mr. Morse was very different from other teachers. In Chuck's eyes, it was the way in which Alex attempted to create personal connections to students that set him apart. Chuck explained,

He is always at the door greeting everybody here. Most teachers don't. They don't even say "hi" to you. They just say, "Let's get started, class. . . ." He is friendlier. He always shakes your hand. I think he is cool, I guess. Most teachers don't really like to talk to students. He cares; he always is asking us what is wrong? He asks if we need to go to the nurse. He really wants to know how everything is going, like at home and stuff like that. He answers a lot of questions us kids have. Some teachers don't really ask you anything about your day, what is going on at home, I guess, things like that.

No observer in any of Alex's classrooms could miss the fact that he constantly attends to building and maintaining personal connections to students. Consistent with Chuck's reporting, when I observed, I saw that Alex always stood in the hallway near the classroom door in between class periods. The previous building principal had insisted

that teachers position themselves in the hallway during passing time for purposes of

discipline and supervision. While Alex appreciated the principal's instruction, he needed

no mandate to use this break time to interact with students. Instead of appearing to be on

patrol, Alex's purpose and demeanor in the hallway looked very different from many

other teachers who might be encountered in the hallways at large high schools. Certainly

different than the teachers I have encountered. Smiling broadly and often laughing with

someone nearby, Alex greeted students as they passed, most of them by name. With a

broad smile that said, "I'm happy to be here and I'm happy you are here too," he greeted

all of the students entering his classroom by name, regardless of the history of

individuals' reactions to him. I had previously witnessed his attention to creating personal

connections with students over several years that I interacted with Alex while supervising

student teachers. While conducting this study I continued to see him expend tremendous

effort towards constructively engaging students on a personal level. It became clear to me

that for Alex, creating and maintaining personal connections with students were critical

elements of teaching. The scenario described below in my observation notes was

representative of his behavior throughout my many days there:

> *I arrive for the day's observation just as the bell signals the end of first period. Students stream out of classrooms in the math wing where I have just entered. Alex emerges with the small group from the resource class, patting students on the back, offering a positive affirmation for something they had accomplished during the resource period (or in another recent setting) and wishing each a good day. I notice immediately Alex's attempt to personalize his farewells. He makes a comment or a reference that is unique to each of the students.*
> *Brandon slowly exits, looking somewhat undirected and less than enthused to continue on with the school day. Alex puts his hand on Brandon's shoulder, and affectionately pats him several times as he says, "Way to go today Brandon, I know you didn't want to do some of that stuff, but you did, and you made nice progress. Imagine what you might do if you were really into it. Enjoy your weekend."*

Promptly attending to each of the students as they exit, Alex says, "Good luck today, Tim. Just remember those four steps and you'll do fine. You can do that stuff."

"Beth, nice work with Adam on those graphs, thanks for sharing your stuff."

When the last student leaves room 201, Alex walks around the corner toward the classroom he shares with Kevin and he continues his interactions, now greeting students as they walk toward room 205. Kevin stands outside the classroom and he greets some of the students, but Alex is clearly the more animated of the two. Standing opposite the door to the classroom, Alex peppers his personalized greetings with words of encouragement or an inquiry about an upcoming a recent event in a student's life. Almost every student returns the greeting and many return the smile. Some share Alex's enthusiasm and a few stop briefly to share something with Alex or respond to his inquiries. Since he is only able to give students a short amount of undivided and individual attention during this transition time, in order that he might offer personal acknowledgement to each student that enters the class, Alex's comments are quick but meaningful. I marvel at Alex's ability to offer individual attention to so many students in such a short amount of time.

The hallway almost clear, both Alex and Kevin encourage several stragglers to hurry on, warning them of the impending bell. Those who had been lingering around Room 205 slowly enter the room as they continue their conversations. Frank, a student in Alex and Kevin's next Pre-algebra class, quickly slides around the corner, and shoots toward the classroom door. Alex offers a hearty good morning to him, but Frank, eyes on the doorway, enters without a word. Frank's last minute arrival and lack of reciprocity is familiar to Alex--and to me, as I have witnessed a similar interaction between Alex and Frank on numerous occasions. I look back to Alex to notice him shake his head with a little smile. Eyes twinkling, Alex says, "Way to go Frank, way to get here on time." As Frank is clearly out of earshot and Alex says this fairly quietly, I sense that he has said it more for himself, as a personal reminder to stay upbeat and positive with Frank, despite Frank's lack of reciprocity.

Alex's attention to creating and maintaining connections to students extended into the classroom and contributed to his efficacy as an instructor. His students experienced his connections to them as critical to his ability to help each of them achieve. Alex knew his students well, and used this knowledge to arrange instruction in a way that could best meet their needs.

Erin, a senior in the Algebra course, shared her ideal of the qualities of a good teacher. In her comments below, she distinguished between having subject matter

knowledge and "teaching" that knowledge and the ability to be connected to students. Although Erin's response may not have been particularly articulate, I interpret her statements to imply that good teaching is more than knowing content, it is about teachers understanding students and making connections to students. As Erin reported:

> What would I decide [about how teachers should be]? They should be more involved. That is it. Getting involved. All teachers, everybody can teach, well, of course you have to go to school for it. But if everybody knew the material, everybody could teach. But it is so much more. It is your attitude and how you act and interact with all the students. You have to get involved. Understanding the students and what they need and stuff, I think, is a big part of teaching.

Earlier, Erin had identified Alex Morse as a teacher that created connections to students and that the quality of his involvement promoted student understanding. She said:

> Mr. Morse is different. Yeah. Just really making sure everybody understands. I don't think that teachers, I mean, I am not saying all, but they don't really get involved with students as much as Mr. Morse. And the way he gets involved and helps out and doesn't get frustrated or anything. I think that is good.

Attending to the Emotional Needs of Students

Alex firmly believed in the pedagogy of creating caring relations with students and in facilitating students developing caring relations with each other and with the curriculum. That relationships and social-emotional concerns were primary to Alex's actions within the school was readily apparent during all of my observations. His thinking related to the importance of creating strong teacher-student connections that are positive and nurturing became evident as we talked about including students with disabilities in general education courses one day. In an effort to understand Alex's perception of how well the larger general education class sizes can meet the variety of individual needs, I asked specifically about his ability to affect all students. His response offered strong

evidence that Alex sees relationships to be at the heart of education, and that the

emotional impact of the teacher-student relationship is profound. In response to my

questions, Alex explained:

> Sandy, I do think we affect all kids, there's no doubt in my mind. But we don't
> even know we are affecting them. Like maybe I won't have interacted with a
> student for 80 minutes. Did I affect them? You bet I did and I don't even know
> how I did. And that to me is one of the responsibilities of our job, to be aware of
> all the different levels of how we do affect our students. How we look at them,
> how we just walk by them. How we interact with them when we are directly
> involved with them. How we are coming across to them when we are not
> interacting with them.

Alex's thoughts and actions indicated a belief that creating an environment that

recognizes the power of emotional attachment involved attention beyond his own

personal interactions with students. He was careful to consider the emotional impact of

content and facilitated discussions in such a way that students were encouraged to

become aware of the potential difficulties that particular issues or discussions might hold

for others. Alex not only deliberately modeled caring behaviors and created caring

relations, he structured his pedagogy to promote students' awareness of their own and

other's emotional needs and actions that responded to such needs.

Much of the literature on effective teaching and enhancing student motivation

stresses the importance of using subject matter relevant to the lives of young people so

that students are emotionally invested (Olson & Platt, 2004). In making content relevant,

there exists the possibility that making such connections may evoke unpleasant emotions

or provide material for insensitive interactions within the classroom. Although arranging

for such connections may indeed stimulate emotions, there exist the danger that making

connections to real-life might backfire, evoking unpleasant emotions or creating a

situation in which students might perceive a teacher making light of a real-life

circumstance that seems anything but light to them. As Alex continued sharing his beliefs

with me about the way in which teachers and the activities of the classroom affected

students, he recalled a situation in which he made the realization that using a current

news event might possibly affect students in a negative way. He had chosen to share a

newspaper article on the AIDS epidemic to demonstrate the application of descriptive

statistics. Alex talked about the potential for instructional activities to negatively impact

students' emotional comfort.

> How we're affecting them when we're talking, telling a general story to the entire class, but you never know if there is one student who's sitting over there and the very thing that you are talking about so blithely could be right smack dab in the middle of that kid's life. Like in math, we're talking about statistics— averages, comparisons, frequencies, and percents and things. And I got the newspaper out and here's this big huge article on AIDS. So we're going to talk about it, it's full of percents—the percent increase of AIDS and the percent effectiveness of all these things to curtail it. And I get all ready to start, to talk about this, and this little light goes on and I said to myself, "Hey, I'm about to talk about this as if it's about some sort of math lesson. What if there's a kid sitting out there who's dealing with AIDS, in some—their family, their extended family, who knows?"
> So I said, I said, to the class, "Now we're going to talk about AIDS statistics and there are some great examples of use of statistics here and obviously this is an issue that is important to all of us. But let's be perfectly clear here." And I looked—and I always believe, dog gone it, don't just look over your class. You've got to look at each one of the students. I'm looking at them, and I'm going row by row. "Now let's get something straight here, I don't know if any one of us sitting here, if maybe you or your family are dealing with this exact issue right now. So we're going to talk about this and we're going to apply it to math, but let's be really sensitive and careful that this is no joking matter." And it went great, as opposed to if I had ignored that, gosh knows what I would have done to the kid that's sitting over there dealing with that.

As Alex recalled this event, his voice became very soft and firm when he repeated

his words to the students, a tone that conveyed a deep empathy for students' feelings and

a strong commitment to creating a safe and supportive learning environment. He

maintained strong eye contact with me except when he simulated looking up and down

the rows of student faces. He then looked directly at me as if I were one of the students. I felt the magnitude of Alex's message to the students as his seriousness and sincerity was powerfully conveyed in his retelling of the story.

Though Alex's reminder to the students of potential personal connections to AIDS and his request that they be sensitive might be considered a simple classroom management strategy, a concern about management was not apparent as Alex recalled the event. Alex, above all, seemed primarily concerned that he communicate to the students that he cared deeply for them, that he understood the complexity of their lives and related concerns, and that their feelings and concerns mattered to him. Additionally, he shared his expectation that students be sensitive to the feelings, concerns, and life situations of one another. Alex had empathy for this students and he seized opportunities that arose in the classroom to help them develop empathy for one another.

<center>Teacher as An Important Adult</center>

Each of the students I interviewed talked at length about how Alex found a way to talk with students individually, to ask about their lives outside of school and to provide individualized assistance when they needed it. I wondered if they felt a degree of personal connection because of these actions. I certainly sensed it, even from students who sometimes appeared only marginally engaged in the academic activities of the classroom. Each of the students I interviewed indicated that Alex was someone that they would go to with a problem; that he was a person who listened to them and was interested in the events of their lives. During one of our interviews, Alex spontaneously volunteered that students often approached him with concerns that might typically be thought to lie

outside of the student-teacher relationship. His comment indicated a realization of the

significant role he plays as an important adult for young people. Alex explained,

> I'm in no official capacity here. I'm not a moderator of a support group. I'm not a
> counselor. But you know, if you take an interest in the students, then you can
> anticipate that they are going to come to you for non-academic concerns. And
> various things, anything that an adolescent might be concerned with, I will
> certainly listen to them and steer them in directions and to people that can help
> them. Maybe help them to sort out a situation and to generate some ideas or
> possibilities. And sometimes just listening to them is all they need.

I asked Erin, a senior from the Algebra class, if Mr. Morse was interested in her

upcoming graduation, and her training as a nurse's aide. She seemed surprised that I

would even need to ask if he was interested. Erin said,

> Yeah, of course. You can really tell he cares about all of his students. He is really
> concerned in how they do in everything. It is not like he is saying, "Well, if you
> don't pass, it is your fault." It is kind of like he is taking responsibility if we don't
> pass. He shows that kind of an attitude, as in, "This is me and you in this
> together, it is not you that is going to fail, it is me and you." That is the kind of
> attitude that I get off of him. So I think that helps also in getting involved with all
> the students and stuff. I had my nursing competitions and he asked me how I did
> and he asked me all about it. He even gave me a chance to share some stories in
> class. He knows what I want to do after high school and everything. He gets
> involved and he asks me about my future plans. He looks at everybody as
> individuals instead of a class.

Benito was a student in the Algebra class that Alex co-taught with Kevin Ward.

New to the community from Mexico, Benito spoke little English. With the help of his

Spanish to English Dictionary and students from the Spanish Foreign Language class,

Alex had constructed large posters, which were displayed above the chalkboard at the

front of the room. On these posters were mathematical terms and common classroom

vocabulary. One of the posters contained the English words multiply, divide, add,

subtract, unknown, sum, equals, in the left hand column and to the right of those words

Alex had placed an equal sign and the Spanish translation of each of the words. Another

poster contained such common classroom words as pencil, paper, rule, calculator, test, model, and the corresponding Spanish terms. As Alex worked with the students in a large group format, he often held an English to Spanish dictionary in one of his hands, and referring to it and these posters, he would add Spanish terms to his instructions and explanations of problem solutions.

Alex often asked questions of Benito, giving him equal opportunity to participate in the activities of the class. He always included many Spanish terms, effectively code-switching between Spanish and English. When he approached Benito's desk during independent work time he always carried the dictionary and consulted it often. Because his co-teacher, Kevin Ward, had a student teacher during some of the time that I was conducting observations, Alex or Kevin would spend some time outside of the class, giving the student teacher, Mr. Eaton, an opportunity to lead the class activities and experience the co-teaching arrangement. Whenever Alex was absent from the room, I noticed that Benito was never called on to participate, nor did either Mr. Eaton or Mr. Ward offer him help at his desk.

When I asked Benito if Alex was a teacher who listened to him or took interest in his work, through an interpreter, Benito shared the following:

> Mr. Morse does listen to me and pays attention to me. However, he doesn't always come to class and maybe he will come in for just a short time and help me but he doesn't always come lately. When Mr. Morse does not come, the other teachers leave me alone and I never say anything.

Benito and many of the students in Alex's classes experienced Alex as an important adult who cared about what they thought and what they did. Considering that

most of the students in his classes struggled with school, and that many, like Benito[4] and Chuck[5], are considered at risk for dropping out, their experience with Alex as an important and caring adult may have provided the relationship that will help them overcome the risk factors for leaving school early. Krovetz (1999) found that a relationship with an important adult was the single most important factor for keeping at-risk youth in school.

Sam, one of the students in the Pre-Algebra class, was hospitalized for a period of two months during the first year of my research. The year after his hospitalization, I interviewed Sam, who then had Alex as a teacher for the Resource class. The subject of his missing a lot of school the previous year came up. Despite the 50-mile distance to the hospital, Sam told me that both Alex and Rick (Alex' co-teacher that year) had visited:

> They came to visit me. Mr. Weir and Mr. Morse came together one time and visited me and then Mr. Morse came down three other times after that. . . . No one else from the school came, but Mr. Morse brought big posters that everybody had signed from that math class and like from the school. It was neat, because I was really bored and lonely. Even though I don't really like school, I missed everyone a lot.

Moral Authority

In 1939, Martin Buber told a group of teachers, "Education worthy of the name is essentially education of character" (Buber, 1965, p. 104). His message resonates with ideas of Kohn (1997), Noddings (1987), and Goleman (1995) that teaching is not simply about stimulating good learners, but also about producing students who are good people. Alex did not merely teach math or chemistry or support students with countless other subjects that they brought to the resource room, he also taught students about being a

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[4] Hispanic students attending U. S. schools (who first arrive during the teen years) often leave school without a diploma.
[5] Chuck has been held back twice. As a teen that is over-age for his grade level, he is at risk for leaving school without a diploma.

certain kind of person—a caring person, a kind person, a person who takes an interest in the world around them, a person who demonstrates respect for others, for ideas, and for the environment, and a person who concerns themselves with making a positive contribution to that world. I saw countless examples of Alex requesting that students respond to one another with kindness. "Send a card to someone today that you love," he said on Valentine's Day.

Alex encouraged the students to involve themselves in local service projects, like Habitat for Humanity, suggesting that working towards the welfare of others might inspire them in ways they never thought possible. He frequently offered class time to discuss school and local issues that students felt strongly about and facilitated students to brainstorm ways in which they might be part of solutions. Often in the context of his "starter story" certain community issues or other events relevant to the lives of students arose. In the following observation notes, Alex facilitated a whole group discussion around the issue of available social opportunities for teens:

> *Alex shares a notice from the local newspaper about a community group comprised of adults and teens that was interested in creating more opportunities and venues for teens to gather in the community. Alex writes on the board the location and time of their next meeting and suggests that the city bus could deliver students to the location. Immediately, many of the students copy the information and express their intent to attend. Several students agree that the lack of teen offerings often results in teens getting involved in activities that are unproductive, even illegal. They share with Alex how the local parking garage hangout often includes under-age drinking and occasional marijuana smoking. Alex quickly agrees that the lack of organized constructive activities for teens does create problems. He listens attentively as other students speak of not feeling welcome at Dino's, the all-ages music venue, because of its almost sole emphasis on hard-core and punk rock. He accepts student's views and encourages them to join the group that is attempting to look into alternatives.*

Without challenging the students by listing the multitude of social opportunities available within the community, Alex accepted their perceptions and encouraged the

students toward civic involvement. He affirmed their strong concern and contrasted their passionate feelings with the portrayal of apathetic teens in news story they had discussed the previous week. He did not dismiss the logic regarding substance use and boredom, but before he moved on to the day's math, he did offer an alternative view:

> *As the conversation winds down, Alex reminds the students, "Sometimes we blame bad choices that people make on other factors. Or we wait for someone else to fix things that we see as problems. I encourage each of you to take responsibility and to be part of solutions."*

Alex's demeanor, regardless of the situation, was consistently optimistic, sincere, respectful, and, in other words, a great model of morality and a source of moral authority. Through the many hours that I watched and interacted with Alex at the school, I came to understand that these moral characteristics were very much about Alex's attitude and approach to life. His students and colleagues corroborated my understanding of Alex's personality. Interviews with Alex confirmed that he considered these moral qualities to be essential to his work as a teacher. He articulated his broad moral mission during our first interview when I asked him about his role as a teacher. After he talked at length about the importance of teachers having content knowledge and instructional expertise as well as inspiring curiosity and a quest for knowledge, he continued:

> And so there is no doubt I am teaching the content. Ethically I have to teach the content. Because the kids have a required sequence of courses they have to pass. They have to pass that ISTEP so ethically I really feel that in math I need to be teaching skills that they need to pass; I need to be teaching the standards that are in our course outline. If someone says this kid has to pass in order to get to the next level of this class in order to fulfill his requirements, I have to address those skills. In here [Resource Class], ethically, I have to teach these students things that they bring that they need the help on. I firmly, from an ethical standpoint, I have to teach them the content, even if I disagree with their need for it. And I am not so hot on the stuff we have to teach in Algebra and Pre-Algebra. We are turning out kids who can solve an equation, but can they balance a checkbook? Do they know anything about economics? Can they measure anything? You know what I mean? Can they put together a single recipe? I am not sure they

can, but we have to teach them the things that are required. Ethically, I have to teach that even though I may not agree. But what am I teaching more than that? And then in addition to that, I really do see my role as, for lack of a better word, an example to these students, a stimulus or a catalyst that communicates that this life should be lived, that you should be excited about it, that you should involve yourself in it, that you should be enthusiastic about it. Put yourself into it, as opposed to, this life is dull, I'm cynical, I'll be aloof, and I'll be non-committed. You know, and I can do that much more effectively by simply *doing what I do* rather than trying to talk that to students. To say to a student, "Would you please be more enthusiastic?" Is much less worthwhile than doing, than saying, than being an enthusiastic teacher.

I seriously doubt that anyone who observed or interacted with Alex at the school would dispute that Alex provided a wonderful example, to students and faculty alike, of being a good person who persistently tried to make a positive contribution to the world in which he lived.

Two years after the above interview, in my last interview with Alex, I again asked him, "What are you teaching?" After a few moments of describing content, performance standards, his own concerns of essential curriculum, good study skills, and problem solving approaches, Alex paused, took a deep breath, and as he continued, tears welled in his eyes and his voice quivered and became very soft:

What am I teaching more than that [content]? I really, I *really* hope that I am teaching these kids a way to approach their lives. A way of being positive and giving a shot at cooperation and cheerfulness and even when you are down, let's smile at each other. Let's say something positive and let's move on. I hope I am teaching that, because they will remember that a lot longer than they will remember how to find the factors of a trinomial. You know what I mean? They will remember. I hope they remember an approach—that I hope I offer—that matches who I am. Because I hope as a teacher I am no different than I am as a friend and as a father and a husband and that guy on the street. I hope it is all one and the same. It should be close. I am teaching that just as strongly. Does that make sense?

As he mentioned during each of our interviews, Alex's deep commitment to the moral life was personal and emotional. He approached this task of instilling character primarily

not by telling students how they should be in the world, but by his very "being" with the students and others in the school.

While I hesitate to reduce Alex's living demonstration to a teaching strategy, modeling or teaching by example is a powerful teaching strategy. All teachers' actions reveal the nature of their social and emotional relationships and reflect their values and expectations. There is ample evidence that suggests that when students view discrepancies between what they see practiced and what they hear "preached," they are most likely to recreate actions that see practiced, or modeled, by those in authority (Mize & Ladd, 1990). On several occasions Alex adamantly expressed that he did not believe in the usefulness or the appropriateness in "preaching" or "moralizing." He had found that telling students how to behave or what kind of attitude to work towards and maintain had much less power than his providing a living example on a daily basis. In Alex's own words, "I've always said, I teach better by what I do than by what I say."

Through his very being with the students, the routines of the classroom, the clear and high expectations, and in taking responsibility for providing strong guidance in how the class operated and how students behaved, Alex portrayed a "stern moral authority." Brantlinger, Morton and Washburn (1999) define the phrase as:

> unbending commitment to the democratic principles of individual worth, mutual respect, responsibility, and social participation. It is an authority that does not put "me" first and does not endure asocial or antisocial attitudes and behaviors. It is a moral stance that communicates that we are here together on a limited plot of earth and must listen to each other and act in ways that are earth and people enhancing. It celebrates and includes diversity and involves dialogue and substantive affiliation across social borders. Competition is with self for self-improvement; cooperation with others in sharing valued resources and in mutual support is the norm. A climate is created in which students feel safe and in which trust prevails. Freedom of expression and actions is allowed; indeed student agency is valued, but only as long as one student's actions are not detrimental to others. (p. 498)

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Though Alex attempted to refrain from moralizing or preaching to students, he remained steadfast that certain behaviors were expected. There were many instances in which Alex explicitly suggested or requested a particular moral action from a student. The following scenario, which I observed during one of my visits, provides a glimpse of a very typical situation in which Alex directly addressed what he perceived as impolite (or uncaring) behavior from a student, and in which he made an explicit suggestion for an alternative action. More salient was Alex's message about the student's attitude and Alex's attitude and demeanor communicated this message non-verbally. The interaction took place in Alex's 1st period Resource class. During this 90-minute block period, Alex and Mrs. Reba assisted eleven students as they completed assignments and prepared for tests for other teachers in a variety of content areas. The students had formed a close-knit group, often helping one another with work and with personal concerns. My observation notes detailed the interaction:

> After Alex inquires about individual work, references his reminders on the board, pairs students and lays out the general plan, all of the students except for Brandon and Sam (both seated at Alex's end of the table) are fast at work. On this day, Alex sits near the end of the long table, closely assisting Bill with Geometry. Gage, sitting on the other side of Alex, reads silently. Brandon sits at the end of the table near Bill, and Sam sits directly across from Alex. Ann, Beth, and Max are working on two different sets of Geography questions at the other end of the table with Mrs. Reba. Denny, quiet and industrious as always, works alone in a carrel at the back of the room. Two other students study vocabulary together at the side table.
> Sam, who has been sitting and staring vacantly at his things, suddenly says very wearily and with apparent irritation, "I need a pencil, can somebody give me one." It does not even sound like a question.
> Alex, seated directly across the table from Sam, responds with a big smile and a burst of energy. He rises from his chair and reaching across the table with both arms, squeezes Sam's shoulders. "'Please' is a good word, Sam."
> As an observer I am stuck by the sharp contrast between the energy and interest demonstrated by Alex and the lethargy and apathy demonstrated by Sam. I think that Alex's tone and attitude here is an attempt to shift Sam's attitude. It's

as if Sam opened the door to interaction with his demand for a pencil and Alex seized the opportunity to model interest and enthusiasm and to remind Sam of the importance of politeness without scolding him.

Sam shrugs, looks down at the table and appears to be trying very hard not to smile. He curls his upper lip, and responds gruffly, "Please is for sissies." He struggles to maintain a very intense frown that is made almost comical by his resisting the slight smile trying to break through.

I almost laugh out loud at this comment coming from Sam. Sam is an extremely tiny 17 year-old. Despite very fine facial hair forming the beginnings of a moustache, he looks very young, more like 12 years old. He has a life-threatening illness that has stunted his growth considerably. I had observed him in the past to effectively use humor to defuse confrontations with teachers and others. He often frequently played on his slight build and young look, using it to great advantage in difficult situations. He has a flair for drama and this comment seems intended to get a laugh. Others in the class also see the humor in Sam's portrayal of a "tough guy" and several laugh aloud.

Alex smiles at Sam's response and although I do not sense that he is upset, there is something in his look that communicates a seriousness about his desire for Sam to couple his request with a "please." Alex's interjection is less about the use of the word please; it seems instead to be an opportunity to guide Sam to move in a different mental direction. The feeling that fills the room during this interchange is jovial, and many of the students that have looked up from their work are smiling broadly at Alex and Sam. Even though the student and teacher are involved in a standoff of sorts, it carries none of the emotional charge that is typical of teacher-student confrontation. No one is looking down, embarrassed, or staring slack jawed, anxious about what might happen. They look at ease and comfortable, as if they know that a good resolution is about to happen.

Sam responds to the attention quickly and continuing the playacting, says, "Okay, please, can I please have a pencil, please?"

Alex, having sat back down at the table, looks over his glasses at Sam and chuckles heartily along with the others. His eyes are dancing, conveying pleasure and deep affection for Sam and his performance. All of the students, even Denny, who rarely looks up from his carrel, continue to smile broadly as they return to their work. Beth offers Sam a pencil and he thanks her with a smile. He then turns to Alex and offers another smile.

As Alex had told me many times, and I had witnessed countless episodes that supported his revelation, he rarely involved himself in direct confrontation with students or other teachers. But he made requests, he communicated clear expectations for student behavior, and he addressed behaviors that were not aligned with those expectations. Although Sam's initial neglect to say "please" certainly did not warrant strong teacher

confrontation, I sensed that Alex wanted to indirectly deal with Sam's apathy and lack of

initiative in getting started as well as his manner of addressing others. His actions had

that effect, as Sam, with newfound energy, began his comprehension questions.

For Alex, the moral and ethical are linked to his caring, his caring for students and

for students learning to care for one another and for the work. This intention to care did

not simply guide his actions with the students, he considered students' caring for one

another an important goal and measure of his success as a teacher. As he reflected on his

first year teaching with a new teaching partner, he said:

> So when people say, how is your year going? I tell them it is going well.
> There are two criteria or two things that I consider. Number one, the students
> seriously try to do the math and number two, they try to be decent with one
> another. Those are two things that make it a good year for me.

Focus on Success

Alex was steadfast in his focus on student success. Although he was quick to

acknowledge students who successfully completed a problem or answered a question,

Alex also persistently acknowledged effort and partial successes. Recall one of Alex's

criteria for a good year—that students are trying their best.

Alex actively searched for even the slightest approximation of success among the

students. In the following scenario, which I observed in the 1st period Problem Solving

class, Alex responded to a student's intended wisecrack by attending to the content of his

outburst instead of to the tone or the manner of his delivery. The student, Tony, was one

of the students in the Problem Solving class that I had placed in the "mostly disengaged"

category. He required (and received) recurrent reminders and encouragements to pick his

head up off his desk and attend to instruction. He fooled around, talked with neighbors

during instruction, used rulers inappropriately, and sometimes resisted Alex and Ted's

interventions. As we reflected on the scenario that follows here, Alex shared that he had

struggled the entire year to create and maintain a positive relationship with Tony. My

observations notes detailed the incident with Alex and Tony:

> *After Tammy reads a story problem which directs students to find the length of guy wire attached to a tower at a certain height and attached to a ground anchor a certain distance from the tower, Alex draws a picture on the board, first using the meter stick to make a horizontal line to represent the ground and then placing the stick perpendicular to the ground and to begin a line to represent the tower. As he draws, he asks the class, "What else do we know? "How tall should I make the tower?"*
>
> *Before Alex has had a chance to turn and look back to the class, Tony, sitting in the front of the row quips, "As tall as you want." He laughs and turns to George for affirmation of his wisecrack.*
>
> *It is clear to me by the tone of the comment, Tony's demeanor, and his directing his attention to George, that Tony's comment was intended to gain the attention of George and possibly others, as opposed to a genuine response to Alex's question. Without malice, Tony's comment seems to be a statement akin to "I don't really care, make it as tall as you want."*
>
> *Alex swiftly responds. He turns quickly, looks directly and intensely at Tony and steps toward his him. Nodding and smiling broadly, with great animation and passion, he points to Tony and responds, "Yeah, you are exactly right, Tony, it doesn't matter how tall the tower is in our picture, because the overall height isn't relevant. It doesn't matter how tall the tower is, but we do know something that's related to a point on the tower, that is important. You are right, Tony, the height of the tower does not matter, but what does mattert? (pause), Mark?"*
>
> *Tony has a stunned look on his face, as if he expected something radically different from Alex rather than this affirmation. With a nervous grin, he turns to look at George and he looks back at Alex. He looks ambushed, but he does not look defeated.*
>
> *Mark responds, "It matters how high up on the tower the wire attaches."*
>
> *"Exactly, Mark, that's what matters," Alex responds.*
>
> *Tony watches Alex move through the calculations and Tony begins to copy notes from the board. Undoubtedly, he appears to have been caught off-guard and what he is left with from his wisecrack is feedback, information from Alex that more fully explains the accuracy of Tony's words. Suddenly Tony seems invested in the problem.*

I was struck at how seamlessly and effectively Alex re-created the situation to be

both a learning opportunity and an opportunity to subtly draw Tony back into the lesson

by publicly and overtly shaping Tony's response into a "correct answer." Alex very

purposely and incredibly quickly responded to Tony in a way that encouraged further participation, as opposed to demanding that he be quiet. And this is what I observed over and over again with Alex. First and foremost, he sought the positive in everyone and in every situation. It was very difficult for students to remain in a negative or a disengaged mode in Alex's presence. He effectively turned this around for students, most often without them even realizing what had happened.

Tony's intended wisecrack and potential disruption to the lesson were successfully diverted by Alex, no instructional time was lost, and all persons were left their dignity and motivation intact. No individual lost face; no individual lost anything, because Alex intentionally prevented that from happening. The lesson continued, Mark answered Alex's question, Alex offered feedback and a prompt for the next step, Tony engaged in the lesson and George followed.

Alex's constant attention to success encompassed important implications not only for creating a positive climate for the class as a whole, but for re-engaging those students who had, for whatever reason, lost investment in the activities of the classroom. Tony, not appearing to show any genuine interest in the model problem, made a wisecrack to get the attention of George. Alex seized the opportunity to re-emphasize to the whole class the importance of determining relevant information in word problems and ignoring irrelevant items. He also created an opportunity to affirm Tony's participation, even though Alex knew that Tony's intentions had nothing to do with solving problems. He attended instead to Tony's words, which was where Alex saw success. Moreover, Alex moved so quickly and thoughtfully as to not allow the lesson to be disrupted in any way by Tony's comment. Curwin (1997) argues that "hope must precede responsibility" and

that certain teacher actions can promote students perceiving themselves as capable and successful and therefore they begin to feel hope. Teacher affirmation promotes hope. Accurate, meaningful, and inspiring teacher feedback is essential to engendering hope in students.

Each of the students who I interviewed talked about Alex's steadfast interest in their success. Mark, having worked with Alex in two different courses over the past three years, spoke of how he had experienced Alex's care:

> He seems to have a caring for students more than I would say most teachers in this school. He seems to have a caring for students and wants them to succeed in whatever they do. He is willing to give up his day to make sure that you succeed. I think all teachers should have that quality.

Seeking out the success in students' actions permeated Alex's instructional interactions with students. He affirmed each and every student's response before seeking further explanation or improved accuracy. Alex adeptly offered praise while requesting increased effort. He was steadfast in encouraging students to re-do, revise, and re-submit work for partial credit. As student work was frequently corrected using a large group format, students would exchange papers and mark responses that were correct with a large "C" using green ink pens distributed for this purpose. If a paper contained a final answer that did not match the correct solution, students would write, with their green ink pens, the correct answer and draw a box around it, just as students had signified their answer. Upon receiving their papers back, students were often offered class time to re-work problems that they had not solved correctly and re-submit their papers for a recalculation of points, receiving 50% credit for accurately re-worked problems. Tests and quizzes were handled similarly.

Alex and I talked about obstacles that he encountered in his teaching. He

mentioned trying to turn around lack of student motivation as one of his struggles. Given

that Alex worked primarily with students who had not achieved much school success as

measured by grades and placement in the lower tracks, many of his students were not

highly motivated. Alex's response was to seek and focus on success. He said:

> The non-motivated, they are tough. What I try to do is, I just try to stay totally
> positive with the kid. I'm not going to try to moralize to him, or tell him how he's
> wasting his life, of anything like that. I will simply instant, by instant, day by day,
> be positive. "Hey nice concentration, you are applying the process, now let's try
> to crank out a few more of those in the next five minutes, because you definitely
> know what you are doing." I don't believe in general comments, I believe in
> specific and positive statements. "Boy, you found all the factors with lighting
> speed. I'll be back in 30 seconds, let's see another." Or, "Hey, I know that you
> really don't like writing, but you are putting together some interesting and
> creative ideas. Think what you might do if you liked it." And then of course, pat
> them on the back or something. And I mean it, everything I say, I mean. So that's
> my approach with a student who lacks motivation, I want to be specific and
> positive with them.

Managing Behavior

There was no evidence of assertive discipline, token economies, or level systems

in Alex's classrooms. He communicated high expectations for behavior and was quick to

respectfully and firmly address any behaviors that interfered with a positive and

productive work environment. For the most part, Alex's management of behavior

appeared effortless. Focusing on the positive, he quickly reminded students of previous

accomplishments (no matter how small) when it appeared that they might lack motivation

or that they might avoid a task. He encouraged constantly, reminding students of reasons

for certain expectations, and predicting probable positive and negative outcomes of

particular actions. When the noise level became too loud, Alex simply stated, "Alright

folks, I need your help here. I have to be able to hear and be heard as I'm working with

individual students. Please lower your voices." While maintaining high expectations and accepting no excuses, Alex simultaneously empathized with students who were angry, tired, or frustrated.

During each and every one of my observations, I always observed Alex interact with each student with respect and dignity, despite the prevailing attitude of the student or the history of their previous interactions. While most students reciprocated respect for Alex and subsequently responded to his requests or directives, there were times when students defied his authority, tested the limits, or somehow refused to do something requested of them. Although I saw very few instances of students being angry, refusing to do something, or struggling with Alex in some way, I did witness two such confrontations, which I describe below. In each situation, Alex firmly reiterated his expectations without sounding exasperated, without sarcasm, without humiliation, and without raising his voice.

When students were off-task, or unprepared, or created some sort of disruption, I noted the interactions that followed Alex's redirection or request. Students most often listened, and sometimes talked, offering some sort of justification or rationale for their behavior. Most often, students complied with Alex's initial request to turn their behavior around. They did not necessarily seem pleased to agree, but I rarely witnessed anything close to a power struggle between Alex and a student. I noticed (and commented in my observation notes) that students reacted to Alex in a way consistent with the manner in which Alex approached them. Because most all of Alex's requests to students who had violated classroom expectations happened quietly, calmly, and without public display, students responded in kind. The respect and civility demonstrated to students, even

misbehaving students, appeared to have the effect of eliciting similar behavior from students, a phenomenon not foreign to the teaching profession.

The students in the Problem Solving Course during the first year of this study often proved to be a difficult class to engage, keep on task, and encourage to effectively utilize independent work time. Most of the students had experienced failure in previous math courses. They were a reluctant bunch, but they did enjoy socializing. Alex' teaching partner, Ted, seemed much less involved than the previous year and my observation notes were filled with instances of Ted sitting at the computer or watching Alex without involving himself in many activities in the class. I noticed early into the year that Alex seemed to have to work very hard with this group; his energy was there, but his energy seemed to require more effort than I noticed in the other classes. He sometimes appeared weary and slightly tense. When I mentioned this to Alex, he replied:

> Tough class. I have to check myself constantly to make sure that I'm not tightening up in my face and body. Making sure that I don't have a constantly furrowed brow or not being animated or spirited. Many of the students are not motivated and are not focused. Sometimes it feels like we are right on the edge of the class getting away, and I, I have to watch that I don't tighten up and lose some of the good characteristics of teaching—that joy, smiling, warmth, cheerfulness, the enthusiasm, the "Hey we're both on the same side, we're together." I have to be careful not to lose that in there, because sometimes I'm right on the edge of it slipping away.

As mentioned previously, I witnessed very few instances of students overtly resisting or defying Alex's request. The following scenario occurred in the Problem Solving class and represents a very atypical interchange between Alex and the students.

> *It is 10:53 and most of the class has stopped working. Student work is put away and students are talking, with several students from the "chatty corner" milling around in front of the room, packs on their backs. Ted (Alex's co-teacher) stands with them.*
> *Alex rises from where he sat working with Abe, and begins talking as he walks to the front, directing students to return to their seats. His tone is serious*

and firm, but his voice remains soft. Alex does not yell, nor does the situation seem to create excitement for him. Directing students to the eight minutes remaining, he tells students to return to their seats. As they move back to their seats slowly, he explicitly asks for all students' attention, and he waits for silence and signs of attention before he begins.

"Let's get these guidelines straight. Because we want everyone to have the opportunity to do well, there are 2 choices. You can do the work in here where there is a lot of help and support, or you can chose not to do the work during class time and do something quiet, something that does not interfere with anyone else."

Alex continues talking, his brow slightly furrowed, his voice soft but firm, conveying a sense of serious urgency. He reiterates many reasons to do the work in class, and the necessity of remaining quiet and in one's assigned seat. Alex points to how the excessive noise and movement in the classroom prevented him and a student from being able to hear one another and that it is vital that a student be able to receive productive help. He makes a distinction between social talking and talk that happens when people work together. Alex appears seriously concerned and he conveys (at least to me) that something will change.

Making eye contact with each of the students, row by row, he tells the students that regardless of what has been done in the past, all students will remain in their seats, occupied with their choice of a quiet activity or quiet work until the period is over. He does not want people out of their seats, period.

Ryan, sitting very near where Alex is standing, shares that he has a difficult time sitting for 90 minutes straight in first period and then coming into this room and doing the same thing. "It's too long," Ryan complains.

Alex listens politely and demonstrates some empathy with Ryan, but his position remains firm. " Can you do it?" he asks Ryan.

When Ryan responds that it is difficult, Alex repeats the question, "I understand that it is hard, but, can you do it?" His tone is serious, but not angry and he conveys encouragement as opposed to a challenge.

Ryan responds with an affirmative, and Alex thanks him for the positive, "go get 'em attitude." He smiles at Ryan. Again, his tone indicates sincere pleasure that Ryan has chosen a positive outcome.

There was no sense of sarcasm with the interchange, nor does it have that effect. Alex communicated a sincere question with a serious and unwavering tone. He offered genuine praise as feedback.

A student from the back left seat chimes in, "What about the 10:58 thing?" His tone is different than Ryan's; it is sullen, angry, and combative. He continues, accusing Alex and Ted of going back on their word and he mutters under his breath as Alex begins to respond. Ted now joins in, explaining that the 10:58 rule is not working, and when something isn't working, they need to take care of it. By and large, he was not involved in this confrontation until now.

Alex summarizes: he wants students to remain in their seats, and wants students to maintain a quiet environment. Alex is at the front of the room now sitting in a desk turned toward the class. He reminds students that the class is not over until 11:03 and that he wants students sitting quietly in their assigned seats

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until then. By this time all students except Chris had returned to their seats. Chris had returned to his seat area, but now he stands next to his desk at the back of the second row. His eyes are glued to the floor, avoiding any eye contact with Alex or Ted. Despite Alex's serious tone, Chris has not complied with the directive. He is not moving, just standing perfectly still and quiet at the back of the room, right next to his seat.

Alex continued to talk to the class as a whole, and then directed his attention to Chris, "Chris, I want everyone in their seat, including you, sir."

Chris protests loudly. Looking sullen and irritated only seconds before, he now looks wild and furious. He yells at Alex— about not wanting to do work, about hating this place, about the impending bell, about wanting to be able to stand. Alex, his jaw slack and brow only slightly furrowed, maintains steady eye contact with Chris, but says nothing. Chris finally stops shouting and stands staring angrily and accusingly at Alex. For what seems like an hour, but is actually only 20 seconds, Alex sits, silent and calm, looking at Chris with an expression of concern. He appears troubled, but not excited. Having completed the tirade and receiving no immediate response from Alex, Chris turns away from Alex and facing the adjacent wall, sits down hard in his seat

Alex quickly thanks Chris, his voice soft and serious. He maintains eye contact with Chris for a moment before looking down at the desktop. He does not appear angry, but he does appear disturbed at Chris's angry outburst and concerned about the brief power struggle that has ensued.

Alex maintained his composure throughout the interchange. Despite his frustration with the students in general and perhaps even anger with the two boys, he spoke to the students with respect, without yelling, without accusation. He refrained from any use of sarcasm, from humiliating Chris, or from pushing the two boys into a corner by offering an ultimatum.

Alex adeptly defused such potential confrontations because of the sincere respect he does have for the students. He displayed genuine concern when a student lost control or a sense of composure because he had chosen actions that he hoped would prevent students from such angry outbursts. For Alex, confrontations were not about a teacher showing who was in control by demanding compliance, "or else." In fact, he purposely avoided engaging in power struggles because he had no interest in students losing the

struggle. Above all else, he strived to maintain the dignity of students and his own

dignity. Demonstrating respect at all times effectively achieved this aim.

In large part, Alex "managed" student behavior through establishing and

maintaining positive, caring, and respectful relationships with students. Promoting

student engagement and academic success through effective instruction also contributed

to preventing behavioral problems. Responding to behavioral infractions with respect and

dignity served to avoid the escalation of minor behavioral infractions.

Respect: The Foundation of Care

The level of respect that Alex persistently and consistently demonstrated toward

the students and adults in the classroom was profound. Regardless of the circumstance,

regardless of whether a student had disregarded a request or a rule, or had neglected to

complete homework or use class time well, regardless of Alex's mood or his perception

of a student's treatment of others, Alex responded with respect. Regardless of the

intended message--a quiet redirection, a private reprimand, a stern directive, Alex

delivered it with respect. Respect and care formed the foundation of Alex's interactions

with students.

At Roosevelt, the teachers set their own professional development goals. The first

year of my study, Alex's goal for his work with students was to treat students with

respect, to demonstrate a consideration for their feelings and their fundamental needs.

This goal was related to his mission that he talked about in the interview transcription

below. In my observations of Alex's work, I found unlimited support that he lived this

mission on a daily basis. In an interview, Alex narrated:

> A philosophical mission that I have, that underlies, that I try to remember, and
> this sounds corny, I try to remember that every one of these kids is someone's son

or daughter. I think of my own children and how I want them taught or at least treated. And it's just kind of a gentle reminder for me to be careful, that I'm dealing with a human being here, someone's son or daughter that they love just as much as I love my own sons and daughters. I always try to keep that in mind. It keeps me from getting too abrasive, or too serious, or too overbearing. Something to remind me to always be decent with students.

My observations of Alex interacting with students confirmed that Alex's actions were indeed aligned with the underlying principle that all students deserve respect, that each student is a son or daughter, that each student is a person with basic human needs. Alex was acutely aware of the potentially damaging or productive effects that adults have on young people. Teachers can effectively guide their own behavior in the classroom by reflecting on the importance of interacting with students in ways that promote growth and healthy emotional development, thus developing climates of caring relations. As Dewey (1902) reminds us:

> What the best and wisest parent wants for his own child, that must the community want for all its children. Any other ideal for our schools is narrow and unlovely; acted upon, it destroys our democracy. (p 3)

Summary

Personal bonds between teachers and students influence much of the learning that takes place in classrooms. Teachers who create classroom climates that are supportive and safe, create learning environments where students feel comfortable to participate and risk making mistakes because they know that they will be accepted. Creating such climates begins with teachers demonstrating care for students and facilitating their care for one another, as well as care for the activities of the classroom and beyond. In this chapter, I focused on the various themes that emerged from the study that were related to Alex's establishment of a caring and safe learning community.

First and foremost, Alex liked his students and demonstrated his affinity for students on a daily basis. He expressed interest in students and their lives, and made overt attempts to learn about them-- academically, socially, and emotionally. He knew their interests, hobbies, living arrangements, job history, and career goals. Without exception, students were aware of Alex's concern and experienced his care as positive. For many, he functioned as an important adult in their school lives.

Alex took his responsibility of providing an education to produce responsible, knowledgeable, and caring students very seriously. He encouraged students to know one another and held students to high standards related to their responsibilities to one another, to the tasks of school and to others in their lives, and to the community. He persisted in expecting that students demonstrate care for themselves, for others, and for learning. Urging students to become involved, to engage not only in the activities of the classroom and school, he communicated to students the profound importance of making a contribution and assured them that their engagement would make a difference—not only for others or for a cause, but for themselves. Alex realized that words of encouragement and communicating expectations were not enough, but that he had to "be" all the things that he hoped for them. Without doubt, he provided a wonderful model to students and colleagues alike.

Through a strong ethic of care, Alex developed close personal relationships with students. Although some of the relationships were not entirely reciprocated by his students, Alex persisted with his caring, consistently demonstrating to all students that each was worthy of his respect and consistently treating them with dignity. In large part, creating and maintaining relationships based on care formed the foundation for

encouraging appropriate behavior and preventing challenging behaviors. To be sure, Alex understood the importance of expectations and routines in the classroom and he taught these to students. Students' failures to meet expectations received responses from Alex, including the occasional detention assignment. But by and large, there were very few instances of students violating classroom expectations and when Alex responded, students accepted and moved forward.

Alex demonstrated profound respect for students regardless of their behavior, their effort, their success, their ability level, or their beliefs. He let students know that certain actions were not acceptable, that more effort was warranted, that skill development was important, or that certain beliefs were unproductive or hurtful, but he always communicated and acted with respect.

Chapter 6

TEACHER COLLABORATION

Teacher collaboration is not the focus of this dissertation, but the various

collaborative teaching partnerships were important elements of Alex's situation and

therefore were important to understanding his work. Furthermore, collaborative relations

are important to special education and general education connections and information

about these connections are important to the field of education. Early on, I sometimes

struggled to keep the focus on understanding Alex's teaching as I primarily observed him

in the context of one co-teaching partnership. Eventually, focusing on Alex's teaching

was made easier by exploring the specific situations of his working within three different

teaching partnerships over the course of the study. The partners changed, but he was the

common element in each classroom. Additionally, I spent some time observing each of

Alex's teaching partners as they taught in a solo arrangement, in a course that was not co-

taught. I also found opportunities to watch them teach without Alex in the co-taught

classes. This happened, for example, when Alex was absent, when he took some of the

students to another room, or when he left to allow the student teacher to teach with

Kevin. This gave me a chance to see how the same group of students interacted with

different adults. In an effort to more fully understand collaborative teaching arrangements

in general and the possibilities such arrangements afforded to teaching effectiveness and

student engagement, I observed other teachers team teaching in other subject areas

besides math. In the end, I feel that understanding more about collaborative team

teaching contributed greatly to a deep understanding of Alex's work as a teacher, which

always was the focus of this dissertation.

The literature related to the successful inclusion of students with disabilities addresses the need for teacher collaboration and presents several types of co-teaching arrangements (Friend & Cook, 1990). Co-teaching is generally viewed as a desirable and viable practice that is associated with teacher and student satisfaction, and improved performance of teachers and students (Cole, 1996; Walther-Thomas, Korinek, & Mclaughlin, 1999).

Alex and each of his teaching partners reported many classroom benefits that resulted from co-teaching. Other teachers in co-teaching arrangements shared similar perceptions. Specifically, teachers spoke of the benefits related to classroom management, individualization, flexible grouping, the use of instructional activities to increase student engagement, and modeling cooperation for students. Teachers also realized benefits to the planning process, concluding that collaborative planning resulted in activities and instruction that were responsive to a wider range of student needs. Simply put, they felt that combining the skills, experiences, and knowledge of two teachers made for better instruction and improved outcomes for students. Teachers also claimed that team teaching had contributed to their own professional growth. Students shared many of the teacher perceptions, although they used different language to describe similar phenomena.

To be sure, many of the elements that I addressed in the previous chapters might also be discussed here. Two teachers in the classroom may enhance the ability of teachers to establish environments of care and more effectively support the academic success of students. According to Alex, the teaching partnerships made it possible for him to carry out many of the teaching activities associated with effective instruction. While such

partnerships may have augmented his skills, ample evidence collected from observations and interview data that focused exclusively on Alex indicated that he was more than capable of carrying out elements of effective instruction without the benefit of a co-teacher. Indeed, as he had to be sensitive to other teachers' feelings and give them space in the classroom, at times he had to compromise his own teaching agenda. For example, Alex was much more interested in involving students in collaborative learning arrangements than either of his partners. While he thought that certain learning objectives might best be addressed by arranging the students into collaborative work groups, he was at times reluctant to suggest such arrangements because his partners appeared less than eager to facilitate collaborative learning.

Additionally, even though having two teachers share classroom instruction made it possible to do more varied types of instruction, such as specific skill instruction in flexible grouping arrangements, project based learning, or individualized tutoring, I did not observe instructional formats to vary widely. Instead, Alex and his co-teaching partners took advantage of the co-teaching arrangement by primarily offering students more individualized assistance. Many of the teachers' and students' perceptions of the benefits of co-teaching were largely about students receiving more individualized and personalized assistance. Rice and Zigmond (1999), in their study of co-teaching in secondary classrooms, also documented student satisfaction with increased levels of personalized teacher assistance as a result of co-teaching.

Without revisiting each of the themes that have already been addressed, in this chapter I explore some of the benefits and problems of collaborative team teaching

suggested by the data collected. Additionally, I present data that seems inconsistent with some of my interpretations.

Classroom Management

The stereotypical notion of classroom management equates management with discipline and discipline as what teachers do to students in response to student misbehavior. An expanded view of management incorporates the many things that teachers do to facilitate student engagement in learning and otherwise prevent problem behavior. Increasing personalization, establishing caring relationships, providing effective academic supports, enhancing student motivation, creating a safe and positive climate, efficiently organizing materials and activities, offering opportunities for meaningful participation, and maintaining high levels of teacher attention are just some of the elements of effective classroom management. This expanded view might be simplified by thinking about classroom management as managing the activities of the classroom to ensure student engagement in learning. Clearly, in most cases, having two teachers in the room allows for increased efficiency in managing the learning activities of 25 plus students. If both teachers are active and share responsibility for all of the students, two teachers will have an easier time running an efficient classroom.

Transitions and Teacher Assistance

The following scenario from my field notes provides an example of how revised homework papers were collected, the board was erased and new notes were posted, the whole group made a transition, and individual students received personalized teacher assistance—all in the space of just a few minutes. This excerpt represents a typical scene in the class taught by Alex and his partners:

While picking up revised homework papers across the front rows, Alex moves down one of the aisles, and on bent knee, assists a student who struggles to re-do one of the homework problems. Having finished passing forward the papers, the students respond to Rick's request that they ready themselves for a new lesson by preparing folders, manual pages, calculators, papers and pencils. Students chat amongst themselves during this time. Rick erases the board and writes new notes from the manual on the clean but dusty slate. After about 70 seconds, Alex finishes with the student and returns to his task of picking up papers, responding to several more students' questions as he moves across the rows. After laying the papers on Rick's desk, he moves to the right side of the room, and calls out, "Okay folks, here we go." Following a very short pause, with Rick finishing up the first model problem at the board, Alex asks the first question related to the information Rick has placed on the board.

So while Rick prepared for the upcoming whole class instruction, Alex picked up papers, provided individual assistance to a student who struggled, facilitated a smooth transition by maintaining close proximity to students, and responded to assorted concerns of several students in the process. Providing frequent and easy opportunities for students to receive individual assistance encourages and maintains high levels of student engagement. Promoting student engagement is an important proactive strategy for preventing problem behavior. Two teachers in the classroom afforded teachers more time to respond to individual student requests for assistance and thus more opportunities to keep students engaged.

Starting Class: Housekeeping and Personalized Attention to Students

In an effort to help general and special education teachers experience parity in their co-teaching relationships, Friend and Cook (1996) suggest that teacher partners share equally the activities of planning, instruction, housekeeping, assessment, individual assistance, and the like. Parity is considered desirable to foster a sense of equality among the teaching partners and to make clear to the students that teacher partners function as a team. For the most part, Alex and his teaching partners chose to divide the work

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according to their strengths and interests. Alex left housekeeping tasks of attendance and record keeping to his partners, who were more than pleased to take responsibility for such tasks, citing their own compulsions to have such tasks completed in a very particular manner. While Ted, Kevin, or Rick began the class with attendance and recording homework, it was Alex who circulated among the students, prompting them to get ready for instruction, making personal contacts, and responding to individual requests. In Rick's words,

I want the grade book to be done in a very specific way and so I do the grade book. Organization of such information and even materials in the classroom is my strength, more so than Alex's. And so I do the record keeping. He's very good at circulating through the room and making sure to personally connect to each student, getting them ready for class, recognizing and remedying situations like students not having materials, or bringing in a non-productive attitude, so Alex gets them ready. He's better at it than I am.

Alex also talked about the benefits of having two teachers in terms of housekeeping and welcoming students.

I have always said I like to get around and greet all the students; I can't do that easily or quickly with 32 students when I am the only teacher in the classroom. I get to do that because Kevin is doing attendance; I get to do that because Kevin is taking care of putting the attendance in the computer; I get to do that because I know if there is something going on that is not good, Kevin will catch it; and I can still go around and greet everybody.

Although Alex suggested that having another teacher to attend to the housekeeping tasks made it possible for him to start the class with personalized greetings, I observed him on several occasions to do this without one of the partners. He did not spend as much time walking among the students as he did when a partner was there. When alone, he divided his attention between taking attendance and talking with students, as he greeted the students as he moved up and down the roles taking attendance. Observing that Alex still figured out a way to provide personalized attention when alone only confirmed for

me that Alex felt very strongly about starting class by making personal contact with each of the students. In his eyes, his ability to offer students meaningful, undivided attention was compromised when one of the partners was absent, but information from my observation notes indicated that he found ways to continue his efforts to do so.

Using Proximity and Privacy

Curwin and Mendler (2000), authors of the popular classroom management text, Discipline with Dignity, promote the idea of using physical proximity and privacy when re-directing or addressing students who violate classroom expectations. What they fail to address is that teachers often find such physical proximity difficult within large class sizes, especially when achieving close physical proximity interrupts whole group or small group instruction. Two teachers' sharing the instruction and management of all students facilitates civil and dignified interactions with students. Because one teacher may be at the front of the classroom at any given moment taking primary responsibility of offering demonstrations and explanations to the whole group, the other teacher is freed to do all sorts of things, including responding to behavioral infractions with proximity and privacy. Similarly, when working with small group of students, one teacher can focus on spending sustained time with each of the working groups, while another floats quickly among the groups, offering reminders and encouragement related to task engagement.

I saw countless examples of Alex and his teaching partners use proximity in re-directing students, keeping them engaged in tasks, and otherwise preventing problem behaviors. All teachers mentioned that having two teachers in the classroom made proximity more possible than it was in solo teaching arrangements. A few students in several of the co-taught classes frequently arrived without all their necessary materials or

neglected to take notes or otherwise engage with the task at hand. Frank and Eric were

two such students. Two separate incidents were recorded in my observation notes:

> *As the pre-algebra class began, I notice that Frank, sitting two seats in front of me, has no materials and is sitting silent, chewing on his fingernails.*
>
> *I'm surprised that Alex hasn't addressed Frank prior to starting instruction, as I have seen him do in the past. Alex is at the board, leading instruction and Kevin is still entering attendance into the computer. I know that it is definitely not Alex's style to draw attention to a student in front of the whole class, but I had seen him provide an encouraging prompt to Frank on other occasions, even from the front of the classroom.*
>
> *Kevin finishes attendance and moves to the side of the room nearest to Frank's row. As Alex affirms a response from Lamar, Kevin follows with a clarifying question to the entire group. As Kevin looks out over the class, Frank quietly motions for Kevin to come to his desk. Kevin quickly responds, kneeling next to Frank to keep the interaction private. While Alex continues at the board, Frank quietly explains to Kevin that he has left his notes and folder in his locker, could he go there to get them? Reaching into his shirt pocket, Kevin completes a pass for Frank without question or reprimand. All the while, Alex continues instruction at the board and students maintain their attention to Alex's instruction.*
>
> *Eric, a 19 year old student who works full-time on the afternoon shift, frequently struggles to stay alert and engaged during the 1st period Problem Solving with Ted and Alex. He does so today. Already having roused Eric during his beginning of class walk down the aisles, Alex now positions himself near Eric's desk as Ted begins at the board with the first sample problem. While Alex directs instruction by leading Ted through the problems at the board, he stays near Eric, quietly alternating encouragement for his efforts with gentle prods to pick his head up off the desk.*

Small everyday disruptions, such as "talking to neighbors" occur at high rates and

account for most of the lost learning time and teacher stress, primarily during whole-

group instruction (Jones, 2000). Having two teachers in the classroom, with one taking

primary responsibility for keeping instruction flowing at a brisk pace and the other

"working the crowd" by moving among the students, logically reduces the rate of small

disruptions. Students are simply less likely to talk with neighbors, pass notes or otherwise

disrupt teaching when a teacher is nearby and can access them quickly

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In the co-taught classes that I observed, I saw very few instances of students disrupting instruction. When students did talk to neighbors, or interfere with instructional activities, one of the teaching partners moved to offending students and privately offered a redirection or request that they demonstrate active and quiet attention to the lesson. During seatwork, Alex and his partners often allowed students to work together and encouraged students to consult with one another when they encountered problems. When it appeared that off-task conversation was more prevalent than on-task discussion or that conversation was more prevalent than work, the teachers (most often Alex) responded by moving to the students and addressing them quietly. Other students were unaware that any teacher intervention had occurred and offending students typically had no audience for challenges to teacher request. The increased effectiveness of co-teachers to respond to student behavior without disrupting classroom activities is recognized as positive outcome of collaborative teaching (Rice & Zigmond, 1999; Nowacek, 1992)

Modeling Collaboration

Without skipping a beat and without any discussion or apparent signals, Rick and Alex switch places and Rick takes over at the board. Alex tries to dictate a problem, but Rick does not acknowledge and continues with his own creation. Alex confronts Rick for ignoring him, and the two share a joking interchange. The students appear amused--laughing and waiting to see what will happen next. Rick apologizes and assures Alex that they will use his problem next. It occurs to me that students are continually witnessing issues and resolutions that arise when people work collaboratively. Alex wants one thing but is not recognized by his partner. In his typical style, Alex alerts Rick without judgment or confrontation. They work it out and the collaborative effort continues.

This excerpt from my observation notes was one example of teachers modeling collaborative work. In interviews, Alex and other collaborative teachers shared their perceptions that students benefited from seeing two adults collaboratively work together in the classroom. Each mentioned that many of their students did not have frequent

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opportunities to observe two adults working closely together to achieve common goals. Alex and his partners were keenly aware that their actions in the classroom communicated to students how one might conduct oneself when attempting to collaborate with others.

When students engaged in collaborative group work, I frequently saw students interact with one another in much the same way that the teachers had interacted when presenting examples. Often one student in a pair would say, "I'll read the steps, and you show the work and then we'll switch." When a solution evaded a group of three girls, one suggested, "Let's go back and try it again, with each of us checking the different steps." When Jerome and Martziah arrived at divergent solutions, Martziah suggested, "You walk me through your way, and then I'll show you my way. Maybe we can find out where one of us went wrong."

<center>Designing and Executing Responsive Instruction</center>

Two teachers should be able to better meet the diverse needs represented in the classroom than one teacher working alone. Alex and each of his partners acknowledged that two teachers thinking and planning together were able to develop better instruction than one teacher working in isolation. Ted, a brilliant mathematician and esteemed veteran teacher, said, quite plainly, "I know that [with co- teaching] students receive instruction that is more thoughtful, let me put it that way. Two heads really are better than one when it comes to figuring out how to teach something, especially with such a range of student abilities."

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Teacher Attention: Formative Assessment and Individualized Assistance

If instruction is to be responsive, teachers must have an accurate picture of what students do or do not understand and adjust instruction accordingly. Having two teachers in the room makes on-going knowledge of current student performance more attainable. If teachers are able to engage in formative assessment, being able to easily collect such information is critical. It is not that one teacher working alone does not or cannot use knowledge of student understanding to guide instruction, but Alex and his partners talked about how co-teaching increased the frequency and ease with which they do so.

Alex and each of his teaching partners often conducted a "homework check" near the beginning of each class period. Having asked students to display the previous day's completed assignment on their desks, each teacher walked up and down the aisles on one side of the room, examining student work. One of their stated purposes of such a check was in part to record a "complete" or an "incomplete" for each student. Because they accounted for student effort in assessment and students most always had an opportunity to make corrections or submit work late for partial credit, such information was necessary. But the teachers also used such information to review particular types of problems and to revisit concepts with which students struggled. Andy shared with me that two teachers dividing such a task resulted in them having a deeper understanding of student performance on the spot, just because they had more time to examine the work of each student. As homework was corrected and certain exercises were demonstrated, I often heard one of the teaching partners say, "Let's do another one like that, because lots of folks seem to be struggling with this concept."

I also witnessed a high degree of active student involvement in the co-taught classes of Alex and his partners. Two teachers working together in the classroom, providing attention and assistance to students, contributed to student engagement. When students returned from an absence and had missed a critical piece of the day's lesson, or when a student arrived without necessary materials, one of the two teachers would assist individual students in getting prepared while the other teacher attended to the larger group. Similarly, during whole group instruction, when one teacher took primary responsibility for displaying work at the board and moving the whole group through the solutions, the other teacher circulated, responding to student queries, noticing student errors in calculation or application of formulas, or providing pieces that students may have missed. When students became confused or encountered difficulties during whole group instruction, students quietly and unobtrusively signaled to the circulating teacher that they needed help, and help came quickly. In the team taught classes of Alex and his partners, one of the teachers always circulated, allowing him to be keenly aware of student performance.

During independent work time, the two teachers circulated among the students, monitoring student understanding and offering individualized assistance. Teacher assistance was not dependent on students initiating requests. Alex and his partners frequently offered indirect prompts and cues, suggested that students question themselves to check their understanding, and reminded students to use the procedural scaffolds in the manuals. Teacher assistance addressed particular performance difficulties to students as they worked. Two teachers working together were able to provide structuring and scaffolding during students' learning to more students, meaning that more students were

unlikely to repeatedly make the same mistakes or proceed through entire problem sets

with conceptual misunderstandings. The extent to which individual students received

instructional scaffolding sufficient to ensure that they accomplished learning goals is

dependent on the amount of attention they receive. In the co-taught classrooms of Alex

and his partners, students received a great deal of teacher attention and assistance,

certainly more than one teacher could have managed alone.

Teachers and students alike frequently addressed the shared and complementary

roles when I asked about the benefits of team teaching. Ted said,

> The other benefit is more instructional, and that while one is the explainer, or
> whoever is sort of in charge at the moment is doing that, the other person cannot
> only manage the class, but when somebody's not getting it, you can detect it
> immediately. You know, one of the bad things about being up front and not being
> able to see what kids are doing on their own papers is that you just have-- you're
> guessing a lot at how well things are being understood. You try to read body
> language and facial expressions, whatever. But with co-teaching, the other person
> can wander up and down the aisles and spot check things very quickly. We get a
> lot of information that otherwise, while teaching by myself, I often miss. And kids
> check out.

Rick mentioned the individual attention that students were able to receive in the

classes that he co-taught with Alex. He explained:

> If we notice that a student doesn't get it, and it is often Alex that notices, Alex
> will just pull a desk up to them and spend time with them. And that's alright with
> me, because I can just pick up or continue with the rest of the class. And that
> happens a lot.

Alex felt that the very best thing about the co-teaching arrangement was simply

that more students received more personalized attention, and that they received help

when they needed it. Teachers were able to personally interact with more students more

often, thereby establishing closer personal relationship in part by providing

individualized academic support. During one of our interviews, Alex talked about this

advantage:

> The past two days I have had to teach all three of my co-teaching classes alone
> because each of my partners was out. And the difference in what I would call
> effective teaching is quite visible to me. One of the best things about two teachers
> in the classroom is that it allows us to give more time to the students. And to me
> that's the bottom line. I can work with this student for several minutes, I can work
> that student for several more minutes and I don't have to worry that 29 other
> students are being ignored because there's Ted or Kevin getting with those that
> need help. We teach among the students rather than just sit at our desks, so when
> we stop at this desk or that desk to work with a student, it's natural, it doesn't
> draw attention to students and no student ever feels odd that we are looking over
> their shoulder. The students know that we will be looking at their work, as they
> work, and offering assistance and affirmation. It's how we do things. The biggest
> thing, Sandy is that the students get more attention, they get more help, the get
> more time, they get more assistance.

Varied Instruction

On a few occasions, I saw Alex and one of his partners divide the class into two

groups to work on different skills or to review and re-teach particular types of equations.

One time, eight students had been absent the previous day and had missed a unit test.

While Kevin took that group to another room to complete the tests, Alex stayed and

reviewed the test with the group that had already completed it. On another day, Alex and

Rick divided the class into two groups: one that had demonstrated automaticity with

particular fraction to percent conversions and those that needed more practice. There

were several instances in which one of the teachers, most often Alex, spontaneously

pulled together a small group of students at the back table, or pulled several student desks

together. Alex reminded me that he felt such flexibility with grouping and their ability to

maintain high levels of teacher assistance to all students in large classes were simply

more likely with two teachers in the room. He elaborated:

I can decide on the spot to spend 20 minutes with these few students here and then spend however many minutes with another group and that these small groups are put together based on need at the moment. And I can spend the time that they need, because the rest of the students who are working independently or in pairs can also get the help that they need.

Erin, a student who had had been involved in other co-taught classes, mentioned that such flexibility allowed students to make decisions about how they wanted to interact with instructional material and how teachers might assist students in different ways. She explained:

Also, like last year in English, say we were reading a book and some students wanted it read aloud and some students just wanted to read by themselves, they can separate and one teacher takes one group and the other teacher takes another group. It is like students can make a decision on how they want to learn and how they want to look over the material and they can do that with two teachers. I think that is good.

In Chapter 4, I shared evidence that the instruction in the Problem Solving course and in the Pre-Algebra and Algebra classes lacked a certain responsive to the needs of high performing students. Similarly, I noted that there was little evidence that effective remediation was conducted by making students aware of individual deficits indicated by the performance reports of the state mandated tests and organizing focused small-group or individualized instruction that addressed specific weaknesses according to performance sub-skills assessed by the test. Granted, each of the co-taught math classes addressed the performance standards and sub-skills contained within those, but the whole-group instruction that dominated these classes appeared less than effective. The predominance of whole-group instruction resulted in all the students receiving the same instruction and spending the same amount of time within specific skill areas, whether or not they had demonstrated competence within a specific skill area or not.

I address this concern here again because this evidence suggests that the teaching partners did not take full advantage of what the co-teaching arrangements offered to conduct more small-group, focused instruction. Granted, they did do some small-group instruction, but Alex and each of his partners could have engaged more frequently in alternative teaching of specific skill weaknesses. Organizing the students into small groups according to their strengths and weaknesses in specific sub-skill areas assessed by the state test, teachers and students would have been made aware of students' current level of performance, and teachers could have helped the students to set learning goals related to the various sub-skill area and current levels of performance. The teachers could then have alternated working with different groups to purposely focus on weaknesses, helping students to use their strengths to build new competencies or discovering with students how strength areas might accommodate certain skill deficits. Peer coaches might have been utilized to help students master new skills and increase both procedural and conceptual understanding specific to the performance sub-skills. Similarly, instruction to provide enrichment activities might have been offered to those students who demonstrated competence with specific skills.

<p align="center">Students Prefer Co-taught Classrooms</p>

One of the items on the student course evaluations used by Alex and his partners specifically asked students whether they would chose a co-taught class or a solo taught class. I reviewed completed surveys from each of Alex's team taught classes that I had observed for this two-year study. Overwhelmingly, student responses indicated a preference for the co-teaching arrangement, with only four students out of over 160 indicating that they preferred a class taught by one teacher. Two of these four students

commented that two teachers made it "harder to get away with stuff," which indicated that their concern was not exactly related to their academic growth. The other two gave no explanation for their preference. Perhaps it was they preferred one teacher over the other. Review of the open ended responses revealed that students expressed preference for two teachers because two teachers: made learning fun and exciting; meant more frequent, immediate, and individualized help; resulted in students feeling more connected to and cared for by teachers; and, assisted students in meeting the expectations of the class.

Each of the students who I interviewed talked about receiving more teacher attention and assistance with their work in the co-taught classrooms. Regardless of whether a student was identified for special education services or not, each spoke of appreciating the extra help that two teachers afforded to students and several indicated that their own learning needs were better met by having two teachers in the classroom, whether they needed individual help or not. Tammy echoed the sentiments of students as a whole when she articulated very clearly:

> Well, compared to last year and the classes I have with only one teacher, it is so much easier because if one teacher is teaching and the other one is walking around checking on stuff, the teacher that is checking on stuff can help you and it is just like so much harder when there is only one teacher because like the main focus, like you have to ask questions and you have to ask them. I don't want to ask questions when a teacher is teaching to the whole group and I usually won't. And then, like, with one teacher, sometimes I just get lost. But if there are two teachers, you can ask the other one and you don't have to bother the first one. And most of the time, you don't even have to bother them, they see you are lost and they are there to help you get unlost. I like the two teachers and I think that there should be two teachers in every class. That would make it much easier on the teachers, too.

Erin, a student who I rarely observed to need help from either teacher, indicated that having two teachers in the classroom has benefits for students who do not struggle.

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While students are able to get their questions answered and get individual help from one

teacher, instruction is not interrupted for the whole group. She explained:

> I really like having two teachers, just because you can always be on task and one
> teacher is answering students' questions and the other one is going on. I think it is
> a better learning environment with two teachers.

Sam, a student who I learned was notorious to students and teachers alike for

procrastination and being ever so slow in starting or completing tasks, ironically talked

about co-teaching benefits in terms of getting his work done more quickly. He said:

> Well, you just get more help and they are there to help kids faster. You can get
> your work done a lot faster, too because if you get stuck on a question, they are
> there to help you faster.

Enjoying the Work of Teaching

Alex and each of his partners, by their own accounts, and according to other

teachers in the building familiar with their work, have enjoyed successful and satisfying

co-teaching relationships. Alex and his teaching partners shared their perception that the

co-teaching relationships had made them better teachers and more satisfied teachers.

Teachers and students in the co-taught classrooms of Alex shared perceptions that

the team teaching arrangements afforded teachers more opportunities to create a learning

environment that was highly personalized, better suited to individual student needs, fun,

engaging, and one in which disruptions were minimized. My observations supported

their assertions, as I witnessed such environments. Alex attributed much of his

satisfaction and ability to create a positive and supportive learning environment to the co-

teaching relationships that had developed between him and each of his partners. He said:

> There is no doubt in my mind that I am able to do 75% of the things I do because
> there is another teacher there. Because I can sense it, when there is a substitute
> and I am running the whole show, it is never as jovial and as happy and as
> pleasant as when there are two [partner teachers] in there.

Throughout the study, I was struck by how very satisfied the collaborative teachers seemed with their work. Alex and his partners were consistently energized and animated and displayed great enthusiasm for the subject matter and for helping students to understand the subject. Each of the teachers told me that they had come to enjoy the co-teaching arrangement more than solo-teaching. They explained that the presence of another adult and the sharing of the tasks encouraged each to drum up energy, to be upbeat, to persevere when student interest waned or vacations seemed far off. It is logical that if teachers enjoy their work, they are more likely to be effective teachers. Because the co-teaching arrangement afforded teachers more possibilities to provide increased levels of individualization through on-going formative assessment, varied instructional activities, individual scaffolding, prevention and management of student disruptions, and means to increase student engagement, the teachers in this study were satisfied with their ability to meet the needs of all learners. In addition, they enjoyed working closely with another adult during planning and during instruction. Ted pointed out that working with Alex was enjoyable and had improved his teaching. He explained:

> That's why I agreed so quickly, I thought that working with Alex would be a wonderful thing to do, it seemed a perfect way to improve my own teaching, and to re-energize my practice in a number of ways, and that's exactly what happened. I knew, because, I knew Alex, that it would be a fun thing to do. And it has been, it is.

I spoke with Rick the year after he left Roosevelt. He had moved to a new school and was teaching Algebra and Calculus without a partner teacher. Having spent much of the previous six years team teaching with Alex, I asked Rick what it was like to be back in a solo teaching arrangement. He shared these thoughts:

Not having Alex to work with is sometimes very lonely. I really miss the adult communication during class. The kids did better with the two of us in class. I also miss his positive attitude toward everything. He really was able to pick me up, as well as the kids, whenever we were down about something. I enjoyed teaching with Alex more than I have enjoyed doing anything else related to teaching. I think personally, that you would be very hard pressed to find a better team than Alex and me.

Collaboration as a Form of Professional Development

Alex and each of his partners not only felt that their collaborative teaching partnerships made teaching more satisfying and more enjoyable for them and for their students, they each talked of how the collaboration had improved their teaching skills. Ted shared that working side by side with Alex in the classroom had enhanced his ability to communicate more clearly and to make better instructional adaptations for students. Ted declared:

> He's taught me everything I know about visually communicating difficult ideas more simply. It was always a goal of mine to explain things clearly, but he can. He's so incredibly good at making these modifications, just visually, how it looks on a piece of paper, or on the board, and I have learned so much from him. And I've been able to take from him, seeing how he makes adaptations for various kids, I've been able to take these ideas and now there are hordes of kids that are benefiting from what he taught me, not just in our classes, but in my other classes. And I think that's been a wonderful part of inclusion and co-teaching. It's been neat for me to learn so much. And I'd have to say that Alex has learned a lot about handling a big class.

Ted clairified that developing skills while working in the classroom with Alex was superior to attending workshops or other types of in-service opportunities.

> It's been great to learn from another teacher. Because you can go to workshops and you sit in a workshop, and it's kind of like they tell you stuff, and you think that sounds good. But I have been able to actually work with somebody I know, in a cooperative way, and it's more effectual to make things happen right there on the spot, with real kids and a real classroom, instead of just trying to read about it someplace, or listen to somebody describe it. It's a whole different thing.

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Rick also attributed changes in his own teaching to the co-teaching experience, and he focused specifically on things he had learned from Alex. Rick claimed, "Alex has brought me out from behind the desk," that prior to co-teaching with Alex he operated under "a traditional belief of students approaching him when and if they decided that they needed his help." Now, especially when teaching solo, he shared that he sought out the students more and in so doing he was better able to monitor progress and understanding than his previous style of waiting for students to initiate the interaction. Rick said that Alex had taught him "that class starts before the bell, out in the hallway" and he had come to realize the importance of such a belief. Rick shared:

> If you're out there greeting them, and saying, "How you doing? Good morning," as they walk into the classroom, they're relaxed, they feel comfortable. If you're in here doing something, and you don't greet them until the bell rings, and you treat them like math students only, instead of like people, then you're not going to get the results that you want. And I learned that from Alex. That's his basic philosophy, you've got to treat them like people first and students second. That's critical. I wish college students going into teaching could see that. We've got some new teachers that don't seem to get it.

Historically, teaching has been a relatively autonomous activity. While many teachers enjoy this independence, many teachers also lament lack of opportunities to collaborate with colleagues to address the day-to-day struggles of teaching. Perhaps the most salient contribution of collaborative teaching to improved teaching is that working closely with another can provide the impetus to think deeply about the teaching, to critically reflect on one's performance and the work of teaching through dialogue with one another person who is intimately tied to the setting, who shares equal interest in making improvements.

By its very nature, the co-teaching arrangement provided regular opportunities for these teachers to simultaneously observe their partner and be observed by their partner.

Ted felt that in the co-teaching arrangement with Alex, each teacher experienced an

enhanced vantage point when compared to a solo teaching arrangement. Not only were

the partner teachers able to more often see things from a student's point of view, they

used this perspective to provide supportive evaluation to the other. Alex and other

collaborating partner teachers shared that such critical reflection lead each to think more

deeply about their teaching. Ted explained:

> In a sense we are being evaluated everyday, it's not like an administrator that
> pops by for ten minutes a semester, it's everyday, we are watching each other, but
> in a very supportive relationship, you know we have common goals. And there's
> nothing adversarial about it at all, either by design or by accident. It's the good
> kind of evaluation where we talk about how we did today, and you know, "We
> could have done this differently, maybe this would work better." Or," What about
> the kids' understanding of dividing fractions, they can do it, but do they get it?
> What did you see that makes you think they understand? This is what I saw that
> worries me. It's hard to push yourself to think and problem solve in this way,
> without another set of eyes, without another person thinking right along with you.

Teresa, another teacher at Roosevelt who also co-taught, shared that she did not

anticipate the benefits that co-teaching would offer to her teaching when she first started

teaming. Teresa declared:

> It does provide reflection time. I mean it's really important to think about our
> teaching and we do this best when we have someone else, who is just as invested
> in what's going on in the classroom, to think with, to reflect with another, and the
> collaborative teaming provides that colleague.

Teresa continued her thoughts that as a solo teacher, she often reflected on her

lessons, assessing their effectiveness, the level of student engagement, and mentally

thinking through changes. She explained that as a teacher thinking alone, she was much

more apt to quickly move on, without arriving at specific potential solutions to

difficulties or without considering all the variables, than she was when reflecting with her

partner. Reflecting with a partner teacher pushed each of their thinking in productive ways.

Alex mentioned that opportunities for "real life feedback and evaluation" were elements that he enjoyed most about co-teaching. He said:

> We are constantly evaluating ourselves and we are constantly evaluating each other. I could teach in my classroom all day long and I can reflect on my teaching, but you know you don't see yourself in the mirror. But Rick is my mirror, or Ted is my mirror. "Boy, Alex we were way over their heads today," or "Boy it was really neat the way you dealt with her, or helped clear up that confusion about the negative integer. I really learned from that." I am constantly taking part of Rick's teaching, and Kevin's teaching, and Andy's teaching and applying it to what I want to do—or what I don't want to do.

The co-teaching arrangements of Alex and his partners worked well together, in part because the teachers shared similar ideas about student expectations, classroom management, active student participation, and the nature of learning. They used common preparation time to make on-going alterations and to negotiate difficulties and differences that arose. Each of the teachers respected the skills of the other and genuinely liked each other, two additional elements that contributed to the success of the partnerships.

While co-teaching arrangements might provide more possibilities for improved teaching and student learning, teachers must actively take advantage of the arrangement for these purposes. Throughout this study, I observed in other co-taught classrooms at Roosevelt and other schools. In these classrooms, I rarely saw the same level of care and personalization, support for student success, and active teacher involvement as I experienced in the classes taught by Alex and his various partners. After watching Alex very carefully over the course of several years and talking with many students and teachers that intimately knew Alex's work, I came to understand that it was largely Alex who made these partnerships work so well. Alex was the common element in each of

these partnerships. Each of Alex's three partners acknowledged that Alex carried the bulk of responsibility for planning instruction and creating materials. Ted and Kevin recognized that Alex primarily led daily instruction in each of their co-taught classes and each shared their opinion that it was Alex who made the collaborative partnerships work so well.

<center>Challenges of Co-Teaching</center>

Although Alex and his partners voiced similar concerns about some of the challenges of collaborative teaching, they each had unique collaborative experiences. All reported that their co-teaching partnerships were overwhelming positive, but each acknowledged on-going negotiations.

The co-teaching arrangements at Roosevelt received institutional support by the teacher partners sharing common preparation time. Alex, more so than the other partners, emphasized the need for effective communication between the partners. Despite the teachers having common planning time, communication had become a formidable struggle for Alex and one of his partners.

My overall impression was that Alex and Ted had simply become complacent with their co-teaching partnership. During their first six or seven years together, they had spent hundreds of hours planning and adjusting. Hours spent talking; they collaboratively designed the new courses, planned units and lessons, and reflected daily on the successes and surprises of those lessons. They conducted workshops for teachers in other schools and in other school corporations and participated in working groups within their own school. In the second year of this study, when I attempted to find out more about the inner workings of their relationship, Alex sadly shared with me that he and Ted no longer

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communicated with the same frequency or intensity as they did when they first started teaching together. Ted was satisfied in letting Alex more or less run the show, and Alex had increasingly taken over the instruction in that class, with Ted acting as accompaniment. I shared with Alex my speculation that his own instructional competence had contributed to Ted's diminished involvement. In his humble style, he agreed that while his comfort and competence may have played some role, there were other factors at work. Alex was reluctant to share much information and he was adamant that he did not blame Ted for what he perceived as their diminished capacity to work as well together as they once did. Ted had assumed a great deal of responsibility within the math department and Alex felt that colleagues and recent administration had not appropriately appreciated Ted. Ted had grown tired of working above and beyond the call of duty. I also guessed that some of the novelty each had enjoyed with the co-teaching partnership had worn off. Alex agreed that he had experienced that.

Rick Weir had left the school before the second year of this study. When we talked briefly in the first year, he felt that the biggest challenge to co-teaching was negotiating common ground in the area of classroom management. Rick felt that teachers had to be consistent with expectations for student behavior. Through his work with Alex he had learned that two teachers in the same classroom could have different styles in promoting students' adherence to the expectations as well as different styles in responding to students who failed to meet these expectations, but that each teachers' style had to be effective in managing student behavior. Although Rick and Alex had very different styles, Rick acknowledged that each was effective. Supporting my observations,

Rick and Alex claimed that management was not something that created problems for them.

Kevin experienced a great deal of health and personal difficulties during the second year of this study (his first year with Alex) and was frequently absent and often pre-occupied with personal matters or occupied with his other classes during their common planning time. Kevin openly admitted to me that he had not been available to Alex as an equal partner in either designing or delivering instruction. Over the summer prior to their working together, Kevin and Rick talked several times about the nature of the co-teaching work, but Kevin was content to allow Alex to take the lead in organizing the course for the year. Knowing that Rick and Ted had experienced several years of successful collaboration with Alex, he wanted Alex to guide him in understanding his role. He would follow Alex's lead.

From the standpoint of the teachers and the students, the co-teaching partnerships were working well. The students who I interviewed felt strongly that the teaching offered by Alex and the teaching partners was better than solo instruction. Each articulated benefits they experienced in terms of receiving help, staying engaged in learning tasks, and enjoying a fun and energized climate.

If the focus of the dissertation had been co-teaching and collaboration, it would have been interesting to explore with Alex and his teaching partners their respective roles and contributions to the collaborative relationships. Of course, gaining access, convincing them to participate and engaging them to explore the nature of their partnerships would have been complicated. Such an investigation would be possible, but only if initiated by the teachers themselves.

Summary

Although this study did not focus on teacher collaboration, exploring the context of the teaching partnerships deepened my understanding Alex's work. The successful co-teaching arrangements in which Alex was involved may have enhanced his abilities to establish and maintain close personal connections to students, create climates of caring relations, and support students' academic work. At the same time, the evidence strongly suggests that the knowledge, dispositions, and skills that Alex brought to each of the teaching partnerships contributed to the classroom success of these partnerships. In two of the three partnerships, Alex completed the bulk of the planning and led the instructional activities of those classes. His role was in sharp contrast to the helper role that many special educators are assigned in co-teaching arrangements (Rice & Zigmond, 1999).

Despite Alex's claims that he accomplished better teaching because of the partnerships, my observations indicated that Alex effectively supported students' engagement and success whether he taught alone or with the partners. Without doubt, the co-teaching arrangements made it easier for Alex to offer students the personalized attention and individualized assistance that he insisted the students needed. However, based on the many hours I observed Alex's teaching and listened to students' perceptions of his skills, I submit that Alex underestimated the strength of his own teaching in solo arrangements.

Students expressed a preference for the co-teaching arrangement and several students who I interviewed were passing a math course that they had previously failed. Compared to similar classes that were solo-taught, I observed more students

participating, less student disruption, and more students receiving individualized assistance in the co-taught classrooms of Alex and his partners. Given Alex's strong skills and the fact that he was in charge in most of the math classes, I attribute students' preferences with the courses to reflect their strong satisfaction with Alex's teaching.

Each of the teachers in these and other co-taught classrooms felt that students received better instruction and more specific individualized help in the co-taught classes. They each felt that their own teaching skills had been improved though the collaborative teaching partnerships and that the experience had re-energized their teaching.

Alex and his partners primarily relied on whole-group instruction to broadly address course objectives. While students received a great deal of instructional adaptations and individualized assistance to meet those objectives, there is evidence that the collaborative teaching partners might have done more to identify instructional objectives specific to individual students and facilitate small group instruction which specifically focused on such needs.

Chapter 7

THE NATURE AND MEANING OF EXEMPLARY TEACHING PRACTICES

In this chapter, I return to my initial questions and discuss my understanding of the knowledge gained from this deliberate exploration of Alex, an exemplary teacher's thinking and practices. The story told within these pages is distinctively Alex's story, uniquely constructed by one researcher based on hours of interviews and classroom observations. As with any single case study, the results are not generalizable. However, the dimensions of Alex's practice explored here do provide substantive content for discussion of what might be considered best practice for teachers working with secondary students, particularly students who struggle with school achievement and engagement. Thus, I examine this study's implications for teaching practices and teacher education. In this chapter, I also discuss the limitations of the study and potential directions for further research.

Looking Back: Returning to the Research Questions

A broad question prompted this research: What practices might contribute to Alex's reputation as an exemplary teacher as he works solo in a resource room and collaboratively in inclusive teaching arrangements? Under that general question, I framed a number of related questions to guide my attempt to understand the lived experiences of Alex, his students, and his teaching partners, including:

1) What instructional practices does Alex employ in his work teaching students with and without disabilities?

2) In what ways does the collaboration between teachers occur and how do students and teachers experience the collaboration?

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3) In what ways do the collaborative teaching partnerships contribute or restrict the teachers' capacity to meet diverse social, academic, and emotional needs of students?

4) How do students experience Alex's work?

5) To what extent and in what ways do Alex and his teaching partners contribute to the development of community within the classroom?

6) How do co-teachers experience their collaborative partnerships?

7) In what ways are caring relations present or not present in the various classrooms where Alex teaches?

8) To what extent and in what ways does Alex create caring relations within the classroom?

Through on-going consideration of these initial research questions and the evidence generated during the investigation, my conclusions highlight four dimensions of Alex's thinking and teaching practice: caring teaching, pedagogical prowess, moral authority, and co-teaching. These and other dimensions of Alex's work were discussed in the results chapters of this dissertation. Each dimension, though forceful in its own right, is made more so because students in Alex's classes were especially successful as they were engaged with the activities of the classroom. Perhaps most important was the finding that these students also felt connected to Alex. This connection was essential to Alex's success because many of his students had come to him disconnected, and even disenfranchised, from school. An additional finding of importance is that at a time when special educators often fail to be included in general education classrooms themselves, in

Alex's co-teaching arrangements not only was Alex included but he and his partners promoted the successful inclusion of students with disabilities.

Pedagogical Prowess and Caring Teaching are Inextricably Interdependent

The events that I have described and analyzed in this study illustrate the complex and interdependent connection between caring teaching and effective instruction. My concluding argument is that one cannot occur without the other. Furthermore, developing and maintaining a climate of caring relations is ongoing and such climates enhance and are enhanced by a teacher's pedagogical competence. Maintaining a climate of caring relations involves effective instruction and effective instruction involves maintaining a climate of caring relations. Without effective instruction, one is left only with interpersonal caring that can be achieved by a kind and caring teacher, but caring alone does not give students the tools they need to make academic gains. Without a climate of caring relations one is left with effective instructional strategies that are not likely to be responsive to the needs of learners.

Demonstrating Care with Responsive Materials and Assisted Performance

Alex's academic preparation and experience with mathematics teaching contributed to his reputation as an effective teacher in the general education classroom. Because of his extensive knowledge of math and his years of teaching the Tech Prep math courses, he was successful in developing curricular and instructional materials that low-achieving students found accessible and useful in promoting their understanding of algebra. Students perceived Alex's creation and utilization of these accessible materials as demonstrable proof that he cared about them as people and learners. Students

experienced the materials as Alex's genuine regard for their engagement and concern for their success.

Although Alex's proficiency with math and making adaptations came from his undergraduate coursework, his commitment to learn about the variety of subject matter areas represented by the work that students brought to the Resource Class demonstrated that he cared about students' learning. Such concern and commitment facilitated his extraordinary ability to assist students in creating and using an assortment of learning strategies and graphic organizers. Tharp and Gallimore (1988) suggest that "assisted performance defines what a child can do with help, with the support of environment, of others, and of the self" (p. 30). Developing such opportunities requires solid content knowledge (which deepens knowledge of the nature of the task) as well as knowledge about students' "proximal development." Proximal development refers to those capacities that are maturing in students, in simple terms, capacities that are developing, but in order to be developed need some sort of assistance (Tharp & Gallimore, 1988). Alex was masterful in developing opportunities for assisted performance. Taking the time to know students' maturing capacities and using this knowledge to organize instruction was another demonstration of how Alex cared for students, for their educational growth, for the level of support they required, and for their becoming independent.

Teacher Humility and Willingness to Learn along with Students

Alex knew a great deal about a variety of subject areas, but he did not distance himself from students by communicating that he "knew it all." Students were keenly aware that Alex was learning with them, particularly in the Resource Class. They knew that he did not have "all the answers." In the Resource class, Alex rarely offered

"answers" to students' questions. When asked, Alex repeated student questions, "States that tried to secede? I don't know, let's look it up." "Evidence of Cole's racism? Let's look in Chapter 3, when Estelle talks about Cole's coming home." Even in the general education math classes, Alex frequently deferred to one of his partners in an attempt to more deeply understand a particularly difficult concept. By genuinely acknowledging to students that he was also a learner and demonstrating ways in which he would approach a problem, he exemplified caring for ideas and for his own intellectual growth. In watching Alex learn with them, students came to see a more personal side of Alex. This humility and life long learner stance enhanced the development of close student-teacher relationships.

Communicating Caring through Curriculum and Instructional Design

Caring teachers are keenly aware of student needs, understanding, and performance in the classroom and they use this knowledge to design instruction. In Alex's classrooms, as in all classrooms, many teaching tasks competed for teacher attention. There is ample evidence from the research on the development of teacher expertise that achieving competence and confidence with subject matter content frees teachers to think more deeply about instruction (Berliner, 1992). Similarly, when content knowledge is well developed and pedagogical capabilities are well honed, teachers can pay closer attention to students, their understanding and difficulties, and to the development of caring relations. Alex's pedagogical expertise demonstrated care by offering instruction responsive to student needs; His efficiency at arranging responsive instruction allowed him to purposefully concentrate on his personal connections to students. He devoted great effort to the development of caring relationships.

By arranging interactive instruction and providing plenty of opportunities for student participation, Alex effectively conveyed to students that they were valuable members of the learning community. Coupling opportunities for participation with the provision of differentiated instructional supports and clear expectations regarding students' respect for one another, Alex established and maintained a climate that was safe for taking intellectual risks. He consistently encouraged students' contributions by offering feedback that emphasized effort and partial success and by responding to inaccuracies with prompts, clues, and suggestions that assisted and motivated students to try again. The close, caring relationships that developed were instrumental to students feeling safe. They trusted Alex, his co-teachers, and peers to provide support and acceptance for their attempts. It is likely that students were more open to content and more able and willing to engage with the work because they felt cared for by their teachers and their peers.

Communicating Caring Through Interest in Students as People

Students felt that Alex cared for them. They perceived his willingness and competence in assisting them to understand and successfully complete academic tasks as proof of his caring. Furthermore, they felt that Alex was a teacher who cared if they were engaged and that he demonstrated this care by making schoolwork enjoyable and interesting. Students indicated that Alex displayed great interest in their lives, including their personal concerns and their involvements outside of school. They appreciated his efforts to talk with them and suggested that these efforts increased their motivation to succeed. Teacher caring is a critical component of effective instruction. Students are more engaged for teachers that they like and trust. They are more inclined to listen to

people who they care for and who care for them. Caring relations, with very rare exceptions, precede meaningful and sustained engagement with subject matter.

A general affinity for young people undoubtedly contributed to dimensions of Alex's thinking and practice. His affection for students gave rise to his persistent focus on success and enthusiasm for the work of teaching. His genuine affection for students sustained his on-going efforts to know students in a holistic sense. His concern for students' social development and social status was a reflection of his affinity for them. Alex's fondness for students and authentic concern for their experiences led him to design and implement interactive instruction and academic scaffolds that supported their increased engagement with the tasks at hand. Supporting the development of social skills and a caring learning community reflected a concern for student competence outside of mathematics, a concern for personal growth.

Moral Authority to Create and Sustain Caring People and Caring Communities

Shor (1992) wrote, "Education is more than facts and skills. It is a socializing experience that helps make the people who make society" (p.15). Alex believed that his responsibility to students extended beyond teaching math or other subject area content. He also felt that he was charged with developing caring and responsible people, people who can relate to one another and make positive contributions to the communities where they live and work. And he saw his role in carrying out this responsibility to provide a positive example and create a learning environment that valued and respected students.

In offering students a variety of supports that fostered their participation and in responding to their mistakes with additional support and encouragement, Alex was not simply employing sound instructional strategies. In doing so, he provided a powerful

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model to students in how to build caring relations and contribute to the development of a caring community. In communities of care, members do not "move on" when another struggles. Members do not pay attention and offer encouragement only to those that demonstrate competence. Members are not so eager to complete tasks and achieve products that they ignore the value of others' efforts. Granted, supports and motivating responses fostered individual student participation and success, but Alex's intentions were broader. He was keenly aware that all of his actions were essentially moral actions, that "caring was a spoken or an unspoken part of every classroom interaction" (Elias et al., 1997, p. 6). Observations of Alex's teaching were a constant reminder that he consistently fostered the development of students' behavior and attitudes through his own living demonstration.

His approach to management and discipline was similar in nature and had the same motivations. When students neglected their responsibilities for their own learning or failed to live by the norms of the classroom community, Alex calmly spoke to these students privately and respectfully. Students were encouraged to loan materials when a peer was in need, they were urged to use kinder words with one another, or lower their voices so as not to interfere with others' work. No names were written on the board for disciplinary purposes. Banishment to a back corner or hallway, or other methods to exclude students from participating in the community were also not done in Alex's classes. His responses to rule violations modeled a "no outcast" norm for the classroom community. He thus demonstrated to students how they might respond to each other when norms were violated. His verbal and non-verbal responses to students who violated class norms or demonstrated negative attitudes communicated to students that he believed

that they were capable of behaving in different, more community preserving ways. His

reactions also preserved students' self-esteem and connection to the community. He was

careful to always explain the way in which behavior and attitudes contributed to the

functioning of the community.

Alex was concerned with students' feelings of self-worth. He also realized his

role in attending to the affective needs of students. He wanted students to feel good about

themselves. In part, he achieved this aim by demonstrating interest and enthusiasm for

them. Yet, Alex realized the difference between self-esteem and self-efficacy. His

enthusiasm for helping students, his concern for their interests and personal lives, his

attentive ear, his personal greetings and acknowledgements, his dignity preserving

responses to misbehavior, his steadfast expectations for kindness, were all ways in which

he promoted high levels of self-esteem. At the same time, Alex supported and noticed

students' accomplishments. In designing effective instruction, providing needed supports

for academic and social success, emphasizing effort and progress, and acknowledging

students' activities outside of school, Alex attended to the development of students' self-

efficacy.

Co-Teaching

In Chapter 6, some of the situational variables that made the exploration of the co-

teaching relationships difficult were discussed. The three partnerships were unique in part

because each was at different stage of development. The relationships were unique in

other ways. Because my access to information about the various relationships was

limited, my understanding of the individual relationships remains tentative. While I am

confident that the co-teaching arrangement was an important dimension of Alex's

teaching, I do not claim a comprehensive and deep understanding of the co-teaching dimension. Nevertheless, teachers and students in this study identified many benefits of co-teaching that are also recognized in the literature (Cole, 1996; Nowacek, 1992; Rice & Zigmond, 1999).

Students and teachers alike expressed a preference for the co-teaching arrangements. All recognized that students received more individualized assistance. They attributed high levels of student engagement and success with respect to the learning goals of the class to the increased assistance. Teachers and students also acknowledged that having two teachers in the classroom made teaching and learning more interesting and more fun. Teachers appreciated the opportunity to work closely with another adult and felt that working together in the classroom not only enhanced their effectiveness in promoting student engagement and success, but that they learned new skills and honed existing skills. Better teaching occurred in the co-taught classrooms as well as in their solo taught classrooms. Co-teaching had also re-energized their teaching.

Much of the research conducted on co-teaching involves special education and general education teachers co-teaching to support the inclusion of students with disabilities in general education classrooms. (Cole & McLeskey, 1997; Friend & Cook, 1990; Walther-Thomas, Korinek, McLaughlin, & Williams, 2000; Walther-Thomas, 1997). Ripley (1997) suggests that effective collaborative or co-teaching occurs when general and special education teachers each contribute their respective skills, training, and perspectives. General educators bring content specialization, and special educators bring assessment and adaptation specializations. Both bring training and experience in teaching techniques and learning processes. Walther-Thomas and her colleagues found

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that collaborative planning was essential to the effectiveness of co-teaching arrangements to meet student needs and satisfy teachers.

Alex and each of his partner teachers more or less operated with instructional plans that had been developed prior to the two years that I conducted this study. Although extensive collaborative planning had occurred previously, Alex and his current partners had not continued the level of co-planning that had once been the norm in Alex's partnerships. They had persisted with frequent reflection, making adjustments to address problems as they arose. Given that Alex and his partners no longer engaged in extensive collaborative planning, it is unclear whether these co-teaching partnerships effectively utilized each partner's contribution to their fullest extent. Perhaps extensive planning time became unnecessary due to the instructional patterns that had been developed earlier.

The co-teaching partnerships were distinctive from those frequently described in the literature (Nowacek, 1992; Rainforth & England, 1997; Rice & Zigmond, 1999; Ripley, 1997). Alex was unique in that he brought both content specialization and assessment and adaptation specialization to the collaborative partnerships. Combined with his extensive experience with co-teaching, Alex was clearly the more competent partner in the co-taught math courses. Alex's knowledge of mathematics content and his adeptness at designing instruction to meet the needs of students with learning difficulties gave him the competence and confidence to lead the instructional activities of the co-taught general education math classes. Each of his partners was extremely confident in Alex's abilities. Perhaps this explains why Ted and Kevin trusted Alex to lead instruction and why all three of his partners were satisfied to rely on curricular design and

instructional planning that Alex, Ted, and Brad had accomplished in their first years of co-teaching.

All students benefited from the skills that Alex brought to the co-teaching arrangement. Alex was not simply an extra hand who provided the additional individual assistance and individualized instructional adaptations that some students required. He was keenly aware of various adaptations and procedural scaffolds that benefited students. Instead of tacking on accommodations, he designed instruction with accommodations that allowed all students to actively participate in heterogeneous whole class and small group instruction. He was instrumental in implementing instruction and curriculum that specifically addressed the needs of students who struggled with math content but that did not interfere with the learning of those that did not. The success of each of the co-teaching partnerships was enhanced by Alex's abilities.

Perhaps too, Alex's competence was detrimental to his co-teaching partners realizing their full potential. It appeared that his teaching partners had come to over-rely on Alex's competence and allowed him to make the lion's share of contribution to instruction. Kevin and Rick both admitted that they had let Alex "carry the load." Perhaps if the partners had not been so comfortable and content with Alex's plans and confident in his ability to lead instruction, the co-teaching partners would have felt compelled to take a more active role or search for ways to participate more fully.

Had the various partners continued to collaborate with the same intensity that they had when the school first re-structured for inclusion, perhaps the teachers would have realized the need for more differentiated instruction and less reliance on whole-group instruction. Because their reliance on whole-group instruction was supplemented

with high levels of individualized and individual assistance, the teachers and students were satisfied that this format was meeting the needs of a wide variety of learning needs. Perhaps with more energy devoted to planning instruction, Alex's and his partners might have discovered opportunities for more varied instructional arrangements and increased possibilities to better meet the needs of students who appeared competent with the course content.

<div align="center">Inclusion: (Not) Seeing is Believing</div>

The reader may have noticed that throughout the findings presented in Chapters 4, 5, and 6, there was little reference to inclusion or mention of special education identification—either of students or teachers. I knew from the outset that Alex Morse was a special education teacher who co-taught courses that included students identified for special education. I assumed that the study would shed light on the teaching practices that supported inclusion. Without doubt, Alex's practices and his collaborative teaching partnerships supported the engagement of all students and supported students with disabilities accessing the curriculum alongside their general education peers.

Lortie (2002) has discussed the concept of non-findings or negative evidence. There was nothing in my classroom observations or student interviews that identified Alex as a special education teacher or that identified the co-taught math courses as being inclusion classes. Even students from the Resource Class never mentioned the words, "special education," "inclusion," or "disability."

Alex's co-teaching partners admitted to me that they were not aware which students were identified as having disabilities or were eligible for special education. The teachers did admit that Alex demonstrated competence with a wider variety of

instructional practices than they did when they first began partnering with Alex. They also felt that Alex had specialized knowledge in how to create resources and present instruction so that low-achieving students could more easily access information and grasp difficult concepts. Each also shared that through their partnership with Alex, they were developing such competencies. None ever referred to Alex as a special education teacher, except Ted, when he shared the history of the school and the restructuring effort.

Alex's teaching, while undoubtedly critical to supporting students with disabilities, supported all students to be engaged with the activities of the co-taught math classes. Most of the students that I interviewed were in the co-taught math classes and I had no way of knowing which students in these classes were identified for special education and which were not. I know that Sam was identified because he was also in the Resource Class, which was only open to students eligible for special education. Each of the students whom I interviewed shared their experiences that Alex was a very competent instructor who engaged and assisted them in learning tasks and made the classroom enjoyable. They also shared that Alex was concerned with their success and their interests both in and outside of school and that he consistently demonstrated that he cared for them and expected students to care for one another. Several thought that Alex was the better instructor of the pair, but not one even hinted that he was a special education teacher.

I purposely had asked students during the interviews about what they thought about the other students in the class. None of the students said anything about special education or disabilities. Their responses were unremarkable in terms of the low-status of the classes. They spoke of getting along, of working with different partners, of friends, and of friendships that had developed. In watching students within the co-taught classes, I

never saw instances of students teasing or ridiculing one another, except some friendly jostling related to dating, haircuts, or hickeys. Student interactions were frequent, and try as I might, I never observed a student to be stigmatized or ostracized.

Students did not reveal any awareness that the co-taught math classes were inclusion classes and had I not known this ahead of time, I would not have developed this awareness through my observations. In much of the literature related to co-teaching and inclusion, special education teachers report great dissatisfaction with their role in co-taught classrooms (Rice & Zigmond, 1999; Walther-Thomas, 1997). Such teacher dissatisfaction results from arrangements in which the general education teacher primarily drives instruction and the special education teacher primarily provides individualized assistance to students identified for special education. Some teachers have reported "inclusion" and "co-teaching" arrangements in which the general educator teaches the general educations students and the special educator teaches the special education students in the back of the classroom at a small table (Ripley, 1997). In contrast, Alex and his partners shared instruction, although in the second year of this study, Alex primarily drove instruction in classes he shared with Ted and Kevin. Both teachers provided help to all students during independent work time and when small group instruction did occur, there were no indicators that groups were formed or assisted according to the special education status of teachers or students. If I were trying to pick out the general education teacher in these co-taught classrooms, based on what I have seen in other inclusion settings, I would have chosen Alex, as he clearly was the teacher in charge of instruction.

While instructional arrangements and classroom practices should not signal the identity of students with disabilities in inclusion classrooms, initially I was disturbed that Alex's co-teachers were not aware which students had been identified for special education. This meant that Alex's co-teachers were not aware of individualized learning goals and objectives contained in the students' IEP's. If they were not aware, they were not taking equal responsibility for addressing those goals. As I discuss later, for many reasons, Alex carried the instructional load during the second year of this study, and as the developer of the scope and sequence for the course, he took primary responsibility for addressing these goals. In so far as Alex had arranged the course to address these objectives, his partners helped to address these objectives, whether they identified the students or not.

I submit that these co-taught classes of Alex and his partners achieved true inclusion. All students and both teachers were full members of the class. Students with and without disabilities were engaged and appeared to be receiving the instructional support that they needed to be successful with the activities of the class. Instructional arrangements and supports were offered to all students as they needed them, without signally special education status.

Limitations of This Dissertation Research

I entered into this study with certain questions and certain expectations not only about what I would try to study, but also what I might find. After all, I had observed Alex teach as part of my field experience and student teaching supervision commitment and had also conducted a short pilot study to guide the research. Having informally observed Alex Morse and his teaching partners for several years prior to beginning this dissertation

research, and hearing the accolades from those that were intimately familiar with his teaching, I wished to know more about Alex's practices and thoughts. Additionally, I hoped to explore the collaborative relationships of Alex and his partners.

Understanding the Development and Negotiations of the Co-Teaching Partnerships

Through many hours of observations and talking with students, Alex, and other teachers, I believe that I have presented an accurate portrayal of Alex's work as a teacher. Exploring the collaborative relationships, including the developmental progression of the various partnerships and the ways in which Alex and his partners negotiated the challenges inherent in most collaborative partnerships presented great difficulties, and I ultimately adjusted the focus of the research.

I initially planned to conduct many classroom participant observations and interviews during the first semester of the research and wait until the following academic year to observe Alex and his partners in their planning meetings. Additionally, I expected to use data collected from observations and interviews during the first year to guide and inform interviews and observations in the second year that would more deeply explore the collaborative partnerships. Plans to specifically focus on the collaborative events that took place outside of the classrooms were thwarted by several events.

Rick, Alex's partner of six years, left Roosevelt High during the summer of the first year of the study. Although I had talked briefly with Rick about his partnership with Alex, had observed many hours in their classes, and talked with several students about their experiences in those classes, his leaving meant that the partnership was over. I might have been able during that second year to ask Rick or Alex to recall past events in an attempt to dig deeper into their collaborative relationship, but I would not have been able

to access to their on-going planning or look for corroborating or conflicting evidence between different types of data, for example among interview and observation data.

Alex's long-standing partnership with Ted Kirchen was deteriorating. I had clues about this during my first year, and felt certain of it during the second year when Alex and Ted taught only one section in a 4-block schedule. During Year 2, I noticed that Ted's active involvement in the classroom had diminished and that Alex and Ted spent much less time together reflecting on their work or planning together. Alex alluded several times in interviews that they were not communicating as often as they should and offered many reasons for the weakening of the collaborative partnership. Neither Alex nor Ted wanted to talk about it with me, perhaps because they did not wish to address it themselves.

The new partnership of Alex and Kevin might have been very fruitful in terms of understanding more about the initial development of their co-teaching partnership and establishment of roles and responsibilities. Unfortunately, in the fall of their first year of teaching together (Year 2 of this study) Kevin suffered what he described as a "nervous breakdown" brought on by a family tragedy. According to Kevin, Alex "picked up the load and ran with it." Consistent with my observations, Kevin explained that their co-teaching relationship the first year more or less consisted of Alex designing and delivering instruction and Kevin assisting. Given the very private nature of Kevin's difficulties and the sensitive issues involved in their struggle to develop a collaborative relationship, their collaborative effort outside of the classroom was not something I was able to explore in great detail.

Alex never mentioned Kevin's difficulties to me. He did share that they were having a good year and working well together. Acknowledging that he was currently carrying the bulk of the load, he explained that certain events had prevented the level of communication and collaboration that they would enjoy in the following year.

Researcher Bias

Readers may be disappointed that I did not attempt to correlate Alex's practices with quantifiable measures of student achievement outcomes. Some may allege that my neglect in attending to such outcomes undermines the significance of this study. While I do not argue against academic outcomes, I suggest that there are additional and equally important aims of education and that the process of education is also worthy of study. I strongly resisted any attempts to validate Alex's work with narrow measures of students' academic capacities. There are studies that claim to uncover dimensions of teaching that cause student test scores to increase and I have read and referenced some of them as I discussed Alex's teaching. Such studies have value. In this study, I primarily concerned myself with students' experiences in Alex's classrooms and explored the ways in which his actions and thought may have contributed to student engagement, enjoyment, and success with the activities of the classroom.

To be sure, I remain unconvinced that students' performance on standardized tests or students' academic prowess can tell us much about the type of person that students will become. I am disgusted by the current educational reform movement that attends solely to student progress as measured by performance on annual standardized tests in a few academic areas. I worry that such efforts make it impossible for schools achieve the aim of creating a responsible citizenry, to fully attend to the socializing experience

necessary to develop the people that we want to be part of this society. I believe that the process of education must attend to socializing students. Nel Noddings (1992) argues for the moral purpose of education:

> At the present time, it is obvious that our main purpose is not the moral one of producing caring people but instead, a relentless—and as it turns out hapless—drive for academic adequacy. I am certainly not arguing for academic inadequacy, but I will try to persuade readers that a reordering of priorities is essential. All children must learn to care for other human beings, and all must find an ultimate concern in some center of care. (xii)

Today's research climate seems focused solely on the empirical validation of teaching, using methods that I believe narrow and constrict dimensions of effective teaching to allow for controlled observations and artificial testing of interventions. I have resisted utilizing such methods and rejected the narrow conception of student achievement outcomes as the only measures worthy of study and worthy of educational effort. I am not apologizing, simply disclosing my views as they shaped this study. At the same time, I acknowledge that my bias might be perceived as a limitation of the dissertation.

Would this study have been stronger had I attempted to correlate student achievement outcomes with elements of Alex's teaching? For some readers, the answer is yes. Obviously, I believe differently. Exploring the impact of teacher practices is important, but how should we explore the impact? How should a researcher judge a teacher's influence on his students? In this study I found students (many who struggled with school success) engaged and happy, connected to their teacher, other students, and to the activities of the class. Student effort was overwhelmingly apparent in each of the classes. The majority of students were achieving success with the course requirements.

Most were hopeful that they would pass their classes with Alex and the graduation-qualifying exam, despite prior failure in math classes or the test.

Implications for Teacher Practice

This study investigated an exemplary teacher's practice by looking closely at actual classroom activities that transpired over an extended time period. Additionally, this study considered the experiences of teachers and students by offering them the opportunity to share their stories in their own words. As such, I believe that teachers will be engaged in this investigation of Alex's work. Teachers want studies that reflect their real dilemmas and acknowledge that teaching and learning take time. They also want studies that do not strip away the context of teaching, that do not attempt to manipulate variables that cannot be controlled in the classroom; studies that reflect the messy process of teaching (Cambone, 1994). Greeno (as cited in Kaestle 1995) argues that the all-too common view that basic research needs to happen in a highly controlled setting also creates problems with translation, or dissemination, that cannot be easily solved. Again, I believe that this research will be accessible and able to be translated into practice by teachers.

The deep description and careful analysis of Alex's practice revealed the complexities of his work in inclusive general education classrooms. It facilitates a contextualized understanding of Alex's role in the co-teaching partnerships and in supporting students that experienced barriers to learning. In this way, this study informs the sparse literature regarding specifics about inclusion initiatives at the secondary level. Though general and special education teachers are frequently teamed to support increasingly diverse student populations, there exists very little information about how

that collaboration might be actualized in practice. Alex and his co-teaching partners respected each other's skills. Alex brought great skills to the teaching partnerships. The initial teaming of Alex and Ted had involved extensive planning and a complete redesign and restructuring of the general education math courses so that students who struggled with math could be successful. Alex and his current partners continued to take advantage of the early collaborative efforts, with Alex providing the continuity. Each of Alex's general education partners realized Alex's competence and was not afraid to relinquish his role as the instructional leader in the co-taught general education classrooms. Instead of arbitrarily dividing instructional and preparatory tasks, the teachers divided work based on their respective strengths, allowing Alex to use his skills of creating personalized connections to students. Each of the partners trusted Alex to design the bulk or instructional materials, including the text, because it was clear that he was adept at creating materials that integrated the instructional accommodations that increased the accessibility of the intellectual content for so many students.

Alex and his co-teaching partners realized the need for on-going communication and reflection of their day-to-day teaching. Current literature that sets forth a broad approach to professional development includes principles of school-based, collaborative work that is embedded in the daily lives of teachers. Teaching in the same classroom together forced these teachers to observe and to be observed and to reflect on what they were seeing. Based on the experiences of these teachers, co-teaching may provide an avenue for professional development that has not received much attention.

In exploring the dimensions of Alex's teaching, I hope that teachers see elements of their own practices and that my explication of Alex's knowledge, skills, and attitudes

might clarify the thoughts and the actions that they take with their students. Alex's experience provides content for the sorely needed conversation among special and general educators concerning ways to engage struggling students in inclusion classrooms, not to mention ways to engage themselves. Alex's teaching dilemmas in the co-taught and solo classrooms are particularly his own, but the problem of meeting the needs of struggling students is one familiar to many teachers. As Alex successfully re-engaged students who had experienced school failure, his story suggests that his practices and attitudes can inform the work of general and special education teachers as they teach alone or together.

Implications for Teacher Education

If secondary schools continue to structure unified systems, in which students identified for special education services have access to the general education curriculum and access to general education peers, teacher education programs for special educators must change. Assuming that secondary education will continue to be departmentalized by content area and inclusion of students with disabilities persists, pre-service special education teachers must be better prepared in knowledge of subject matter, similar to their general education peers.

Given that special educators (and general education teachers) will also be expected to provide individualized support to students with specific learning and emotional difficulties, some degree of specialization also seems warranted. Colleges and universities might respond to this specialist-generalist struggle by placing increased emphasis on principles and practices of effective pedagogy for all pre-service educators—special and general. As Cole (1992) and others (Reynolds, Wang, & Walberg, 1992) suggest, teacher education programs must prepare pre-service teachers to develop competence in designing and implementing instruction, with an emphasis on

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teaching students as opposed to teaching subject matter. In exploring the knowledge bases of special and general education, researchers determined that the essential teaching practices for special and general education teachers were similar, implying that both special and general education teachers receive similar preparation (Canon, Idol, & West, 1997; Reynolds, et al., 1992). According to these researchers, this can be best accomplished by a broad collaboration between special education and general education at the university level working with a common knowledge base of effective pedagogy.

Required teacher education courses already attend to developing content knowledge—both subject matter and teaching methods, and I suggest that heightened importance be placed on a variety of instructional practices, independent of content. In addition to learning a variety of instructional practices, pre-service teachers should understand the importance of demonstrating enthusiasm and how to emphasize success. Teacher education programs should emphasize the importance of relationships and offer beginning teachers practical strategies to learn about students' interests, students' learning and motivational styles, and how to use such information to organize instruction. Coursework must also address the development of teacher-student relationships and creating classroom communities based in care. In part, this might be attempted by structuring programs in which students are organized in cohorts, spending sustained time with each other and instructors. At the same time, pre-service teachers need to explore and learn strategies to build relationships within the classroom.

How can teacher education programs prepare students to realize the interdependent relationship between caring and effective instruction? I submit that for pre-service teachers to deeply comprehend the connection, they must experience it within

the program structures and classroom practices of the university. University faculty must be skilled pedagogues—they must adhere to principles and practices that have demonstrated worth in instruction, including efforts to develop close, supportive relationships with students.

In addressing the development of competence in instructional practices and building relationships, there exists the danger that teacher education programs neglect to make explicit how management and instructional practices are implicated in students experiencing care and support in the classroom. Lecture dominated instruction that does not attempt to make connections to what students already understand or believe, or instruction that fails to address individual student needs and styles work against creating a climate of support or care, no matter how caring might be developed through interpersonal relationships. Management practices that rely on punitive disciplinary practices, teacher control, and excluding students are not caring practices and destroy community, despite teachers' efforts to create community through purposeful activities. Making the connections between caring, instruction and management explicit can be enhanced through exploration and study in teacher education, but students must also experience practices and structures that result in their feeling cared-for within the context of teacher education programs.

Alex assessed the information related to students' present level of performance and other diagnostic reports contained in students' special education files to be of limited value for the purpose of designing and arranging instruction. He pointed out his need for information about students that would actually help him design interventions, such as motivation, knowledge and use of learning strategies, self-management, and interests.

In discussing the diagnosis of learning problems, Reynolds and colleagues (1992) have called for closer attention to variables related to learning that can be manipulated by educators. Alex's reflections support these researchers' suggestion that schools of education might prepare teachers and educational diagnosticians to study individual students in terms of how well they use time, how competent they are in self-management and in the use of meta-cognitive strategies, and how their behavior might impact their participation in various instructional arrangements. Special and general education teachers alike need to receive instruction in the development and use of these types of student assessments. These and other assessments should be used within the context of teacher education programming, whereby pre-service teachers are assessed for the purpose of designing and implementing instruction and these processes are made explicit for students.

Although formative assessment receives attention within teacher education coursework, university students experience little in the way of professors using formative assessment. Teacher education students should learn about formative assessment by university instructors closely monitoring student work and adjusting instruction accordingly. Again, instructors need to make their actions related to formative assessment explicit.

While schools of education undoubtedly struggle with facilitating the development of certain teacher dispositions, certain structures might be implemented. In investigating dimensions of Alex's teaching, we see the contributions of his affinity for young people. Teachers should like young people. Can we prepare teacher education students to like young people? To achieve this aim, teacher education programs must facilitate increased

opportunities for their students to interact with young people. Spending more time in K-12 classrooms earlier in their teacher education program will likely fall short in either getting students to like young people or in accurately assessing their own affinity for young people. Classroom teachers typically involve university students in the classroom by having them tutor individual students, work with small groups, observe teaching and learning, or occasionally teach a lesson. To the extent that pre-service teachers are not accomplished with subject matter or with pedagogy, classroom based activities simply are not the best way for them to develop an affinity for young people or accurately assess such affinity. Increasing the amount of time that pre-service teachers must perform activities for which they are not adequately prepared seems more apt to get in the way of their developing an affinity for young people.

Instead teacher education program must offer increased opportunities for education students to interact with young people in endeavors for which either has great competence or interest. Youth groups, extracurricular activities, and service projects come to mind. Opportunities to interact with young people must involve pre-service and K-12 students working together in efforts built on interest, enjoyment and competence. In this way, pre-service teacher are more likely to cultivate affinity for young people.

The students interviewed for this study made clear the impact of teacher enthusiasm on promoting student engagement. While enthusiasm for subject matter is suggested in the research as promoting student engagement in learning, students in this study spoke of Alex's enthusiasm for teaching and interacting with them. Again, reading about the importance of enthusiasm or learning ways to demonstrate enthusiasm is insufficient for pre-service and in-service teachers to understand the importance of this dimension of

effective teaching. University faculty in teacher education programs must also demonstrate enthusiasm for students and for teaching. In and effort to support such enthusiasm and skill development, university reward structures must recognize effective teaching as equal in value to research production.

Finally, teacher education programs need to make sure the pre-service teachers are afforded ample opportunities to work with (or at least observe) effective K-12 teachers, teachers like Alex. While most teacher education programs rely on field placements to achieve the aim of giving education students experience in real classrooms, effective K-12 teachers might be invited to teach model lessons in university classrooms. Whole classrooms of university students could then be exposed to exemplary teaching practices. University instructors, having observed the same teacher and lesson, could help students to develop skills in labeling and analyzing teacher behaviors. Often pre-service teachers in field experience settings are not aware of what they are observing in terms of good teaching.

Summary

Although my conclusions imply that certain teaching skills, attributes, and arrangements may be more successful than others in promoting student satisfaction, engagement, and success, these generalizations do not constitute a prescription. Throughout the study, I attempted to illuminate my thinking concerning teaching practices and teacher dispositions that contributed to student involvement and success by offering specific examples that might serve as guidelines. I have also referenced others' work regarding teaching and student engagement. There are undoubtedly other and additional teacher practices and attitudes that also promote student engagement and

success than those offered here. In listening to the voices of students and teachers familiar with Alex's work (including Alex himself) and in observing Alex's work, I found certain components of his teaching more effective than others. Ultimately the reader will judge if Alex is the kind of teacher that they would have influencing the lives of students and the work of other teachers.

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Appendix A

Sample Pages from the Pre-Algebra Manual

Study # <u>00-3568</u>

INDIANA UNIVERSITY—BLOOMINGTON
INFORMED CONSENT STATEMENT

Teaching as Caring Relations: A Contextualized Understanding of a Teacher in Collaboration

You are invited to participate in a research study. <u>The purpose of this study is to investigate effective collaborative teaching and the creation of classroom climate.</u>

INFORMATION

In an effort to better understand the experiences of those involved in collaboratively taught classes, this research will involve 3 teachers, 2 administrators and 8 to 12 students. One teacher and each of his two teaching partners will be observed in classrooms in which they co-teach. This research will also involve interviews with these teachers, their students, and school administrators. The researcher will review written records about the collaboratively taught classes, including teaching materials, curriculum guides, and classroom displays of student work. Student work will not be collected or copied, but reviewed in the context of teachers offering assistance or soliciting comments from students. Examples include: student demonstrations on the chalkboard, project presentation, and in-class seatwork.

Interviews Five interviews with the primary participant will be conducted throughout the study. Two interviews with each of this teacher's teaching partners (n=2) will also be conducted. One interview with two school administrators will also be conducted. Each semi-structured interview will require approximately 45 minutes, with questions pertaining to the nature of the teaching arrangement, effective instructional strategies, perceptions concerning the benefits to students, background information, perceptions concerning classroom climate, and perceptions of student understanding. Interviews with the teacher of focus will include questions that address beliefs about effective educational practices and students needs, including questions about personal and teaching efficacy. Interviews with teaching partners will include questions regarding the effectiveness of the focus teacher and perceptions of his professional relationships with students and other adults, perceptions of classroom climate and the contribution of the teachers to this climate, and general perceptions of student progress. Interviews will be audio taped and transcribed. Transcriptions will be saved on computer disks. The researcher may ask individuals to review interview transcripts in an effort to check the accuracy of these interview records. The Audio tapes will be destroyed at the end of the study.

Observations This research project will also involve weekly classroom observations in each of the team taught math classes. The classroom observations will last the entire class period and will be unobtrusive. No changes to any students' or teachers' routines will be necessary. Classroom observation notes will be handwritten and typed following observation sessions.

RISKS

There are no foreseeable risks.

Participant's initials_____

BENEFITS
Participants are likely to gain insight into their own teaching practices and to benefit from being involved in a study in which they are asked specifically to reflect on their teaching efficacy, instructional strategies, and collaborative work with colleagues. The final report is likely to contribute to a body of knowledge concerning teacher collaboration in inclusive settings.

CONFIDENTIALITY
The information gathered for this study will be kept confidential. The data will be stored securely and will be made available to the investigator conducting the study and her faculty advisors unless you specifically given permission in writing to do otherwise. No real names of people, schools, or towns will be used in any oral or written reports of the study. No reference will be made in oral or written reports that could link you to the study. Pseudonyms will be used for all participants, the school, corporation, and the town. Since there are a small number of people participating in the study, there is a chance that others from the school may be able to identify you in the report even though names of people and places will be changed. The researcher will take measures that interviews and other conversation take place privately and remain confidential. No raw data will be shared among participants. The information collected in this study will be published and used for other educational purposes such as conference presentations and workshops.

Other people may help the researcher look at the information collected within the interviews, observations, or written records. These will be faculty members at Indian University specifically assigned to help the researcher complete this project. Another doctoral student will also help review the information collected.

CONTACT
If you have questions at any time about the study or the procedures you may contact the researcher, Sandy Washburn, at _702 West Fourth Str._ , and _334-1435_ . If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the office for the Human Subjects Committee, Bryan Hall 110, Indiana University, Bloomington, IN 47405, 812/855-3067, by e-mail at iub_hsc@indiana.edu.

PARTICIPATION
Your participation in this study is voluntary; you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be destroyed.

CONSENT
I have read this form and received a copy of it. I have had all my questions answered to my satisfaction. I agree to take part in this study.

Participant's signature _____   Date _____

Investigator's signature_____   Date _____

Consent form date _____

Appendix C

Informed Consent—Students

INDIANA UNIVERSITY – BLOOMINGTON
STUDENT/PARENT INFORMED CONSENT STATEMENT
Teaching as Caring Relations: A Contextualized Understanding of a Teacher in Collaboration

You are invited to participate in a research study. <u>The purpose of this study is to gain an understanding of the experience of high school students who are enrolled in collaboratively taught classes.</u>

<u>INFORMATION</u>
In an effort to better understand the experiences of those involved in collaboratively taught classes, this research will involve 3 teachers, 2 administrators and 8 to 12 students. Students will be freshman, sophomores, juniors, or seniors who are enrolled in the co-taught classes. The students will age in range form 14 to 19 years of age. This research will involve interviews with teachers, their students, and school administrators. Classroom observations will be done in several classrooms in which two teachers work but the focus of these visits is to better understand teacher interactions with students in general, not to observe individual students. The researcher will review written records found or used in the collaboratively taught classes, including teaching materials, curriculum guides, and classroom displays of student work. Student work will not be collected or copied, but reviewed in the context of teachers offering assistance or soliciting comments from students. Examples include: student demonstrations on the chalkboard, project presentation, and in-class seatwork.

Interviews All students in the class will be invited to participate and offered an informed consent form requiring a parent signature if the student is under the age of 18 years. Students will be randomly selected for interview invitations from this sample that returns informed consent statements bearing the required signatures. The researcher will ask to meet with these randomly selected students individually for one interview. Additionally, the researcher may ask student to participate in a focus group interview with 3 or 4 other students. All interviews will be scheduled at the student's convenience, either at lunchtime or after school hours and last approximately 30 minutes. Interviews with students will include questions regarding their level of satisfaction with their own understanding of course content, their perceptions of teacher effectiveness, care, and concern, and their feelings about the climate of the classroom. Students will be asked questions about their experience in co-taught classes and how this arrangement differs from solo taught classes. Interviews will be audio taped and then typed into a computer. This information will be save on computer disks. The researcher may ask individuals to review interview transcripts in an effort to check the accuracy of these interview records. The audiotapes will be destroyed at the end of the study.

Observations This research project will also involve weekly classroom observations. Students participating in the project are not the focus of the observations and no specific contact between the researcher and any student is required during any of the observations. The classroom observations will last the entire class period and will be unobtrusive. No changes to any students' or teachers' routines will be necessary. Classroom observation notes will be handwritten and typed following observation sessions.

Student's initials_____ Parent's initials_____

RISKS
You may feel uncomfortable with being interviewed or feel nervous that it is you that the researcher is observing. The research is about understanding collaborative teaching, including student perspectives, but you will not be the focus of any classroom observation. If others know that you are involved in research about teaching, you might feel that you have been specially selected, or worry that others will think you are somehow special. I will do nothing that will indicate to other people that you are involved in the study. If you decide to participate in the focus group, 3 other students from your math class may also participate, so those students would know of your involvement in the study. I will never share your participation with any of the teachers or with other students. We can talk about these issues ahead of time and your wishes will be respected.

BENEFITS
Rarely are students given opportunities to share their ideas and opinions about teacher arrangements and interactions. It is hoped that the chance to talk about your school experiences may be helpful to you. This study may offer useful information to teachers and beginning teachers and may contribute to improving the educational experiences of students in co-taught and solo-taught classrooms.

CONFIDENTIALITY
The information gathered for this study will be kept confidential. The data will be stored securely and will be made available to the investigator conducting the study and her faculty advisors unless you specifically given permission in writing to do otherwise. No real names of people, schools, or towns will be used in any oral or written reports of the study. No reference will be made in oral or written reports which could link you to the study. Pseudonyms (fake names) will be used for all participants, the school, corporation, and the town. Since there are a small number of people participating in the study, there is a chance that others from the same classroom or focus group may be able to identify you even though names of people and places will be changed. The researcher will take measures that interviews and other conversation take place privately and remain confidential. No raw data will be shared among participants. The information collected in this study will be published and used for other educational purposes such as conference presentations and workshops.

CONTACT
If you have questions at any time about the study or the procedures you may contact the researcher, _Sandy Washburn_, at _702 West Fourth Str._, and _334-1435_. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the office for the Human Subjects Committee, Bryan Hall 110, Indiana University, Bloomington, IN 47405, 812/855-3067, by e-mail at iub_hsc@indiana.edu.

PARTICIPATION
Your participation in this study is voluntary; you may refuse to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be destroyed.

CONSENT
I have read this form and received a copy of it. I have had all my questions answered to my satisfaction.
I agree to take part in this study.

Student's signature _____ Date _____

Parent/Guardian Signature _____ Date _____

Investigator's signature_____ Date _____

Consent form date _____

Appendix D

Questions for Interviews with Alex

Note: The following questions were asked over several interviews. Additional questions were derived from review of observational data and are not recorded here.

1. How long have you been teaching?

2. How did you chose mathematics education? Special education?

3. What can you tell me about the school's move to inclusion?

4. People have identified you as an effective teacher. Why do you think they perceive you as affective?

5. What is your role as a teacher?

6. How do you go about learning about your students?

7. What sorts of principles or knowledge should teachers have in regards to creating a productive classroom climate?

8. What do teachers need to know and do regarding management student behavior?

9. To what do you attribute your success as a classroom teacher? As a collaborative teacher?

10. In problem solving situations, do you follow a certain procedure to help students?

11. What is your role in the co-taught classrooms?

12. Have you experienced failure in your work as a teacher? To what do you attribute this failure? As a collaborative teacher?

13. What is it like to collaboratively teach with (Rick, Ted, or Mark)?

14. How long have you known (Rick, Ted, or Mark)?

15. How did you come to teach with (Rick, Ted, or Mark)?

16. Did you discuss certain things before or at the very beginning of your first year with each of the partners?

17. What types of things do you discuss now?

18. Do you make decisions ahead of time about who will do what in the classroom? How have you made these decisions and why?

19. What do you and your partners do to motivate students?

20. How do students perceive you?

21. Are there certain types of instruction or activities that the co-teaching makes possible?

22. Do you and your partners practice some of these?

23. Are the certain types of instruction of activities that the co-teaching prohibits?

24. How have the various the co-teaching partnerships impacted your teaching? What about in other classes?

25. Are there things that you wish for the various co-teaching arrangements?

26. What difficulties or challenges have you experienced in your co-teaching with Alex?

27. How have you resolved or not resolved these?

28. What are you thinking or trying to accomplish when your partner is in the role of the "teacher" at the board?"

29. How successful are students with the activities of the various classes?

30. What are the qualities of a good teacher?

31. What are you teaching?

32. Why do you start each class with a story?

33. IN the resource class, you are assisting students with a variety of subject areas. How do you keep up?

34. Is it possible to meet the needs of individual students in the larger co-taught general education classes?

35. Do you have a personal philosophy as a teacher?

Appendix E

Questions for First Interview with Teaching Partners

1. What is it like to collaboratively tech with Alex?

2. How long have you known Alex?

3. How did you come to teach with Alex?

4. Did you discuss certain things before or at the very beginning of your first year together?

5. What types of things do you discuss now?

6. Do you make decisions ahead of time about who will do what in the classroom? How have you made these decisions and why?

7. What do you and Alex do to motivate students?

8. What does Alex do that is most important to the teaching-learning process?

9. How do students perceive Alex?

10. Are there certain types of instruction or activities that the co-teaching makes possible? Are the certain types of instruction of activities that the co-teaching prohibits?

11. Has the co-teaching relations with Alex impacted your teaching? If so, how? What about in other classes?

12. What difficulties or challenges have you experienced in your co-teaching with Alex?

13. How have you resolved or not resolved these?

14. What are the advantages and disadvantages to co-teaching with Alex?

15. What are you thinking or trying to accomplish when Alex is in the role of the "teacher" at the board?"

16. How would you describe Alex?

17. How successful are students with the activities of the various classes?

18. Other questions were generated from the observations. These were unique to each teaching partner.

Appendix F

Interview Protocol for Special Education Department Chairperson

1. How long have you known Alex?

2. What is the extent of your work together, or the context in which you have observed Alex's work?

3. In what ways do you perceive Alex to support or not support students in his classes?

4. In what ways do the two of you communicate about students?

5. What do you know about Alex and his work with (Rick, Ted, or Mark)?

6. How do you perceive the co-teaching of Alex and his partners?

7. Could you co-teach with Alex?

8. How is the co-teaching perceived by other people in the department?

9. What can you tell me about student perceptions of Alex's teaching?

10. What can you tell me about Alex's relationships with students? With other teachers?

Appendix G

Questions for Student Interviews

1. What is it like to be in a class taught by Mr. Morse and (Mr. Weir, Mr. Kirchen, or Mr. Ward)?

2. What sorts of things does Mr. Morse do to help you understand things?

3. What sorts of things does Mr. Morse do that do not help you understand things?

4. What do you like about having two teachers in the classroom?

5. How are Mr. Morse and (Mr. Weir, Mr. Kirchen, or Mr. Ward) alike or different?

6. Is Mr. Morse the same or different than other teachers that you have or have had in the past?

    a. How so?

7. How do you use the Math manual?

8. Do you find it useful?

9. Would you say that you are motivated to do your math? How much or how little?

10. What do Mr. Morse and (Mr. Weir, Mr. Kirchen, or Mr. Ward) do that helps or doesn't help your motivation?

11. If you were to make decisions about how teachers should be or how they should act towards students, what would you decide?

12. What do you think about how Mr. Morse and (Mr. Weir, Mr. Kirchen, Mr. Ward) are together in the classroom?

13. What do you think about other students in the classroom?

14. Does Mr. Morse teach you other things besides math or other school subjects?

15. Does Mr. Morse listen to you?

16. Does Mr. Morse care about you?

17. How much are you learning in Mr. Morse's class?

18. What does Mr. Morse thing about your work? About you?

19. On a scale of 1-10, how satisfied are you with this school?

20. On a scale of 1-10, how satisfied are you with Mr. Morse's teaching

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VITA

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EDUCATION

2004   Indiana University, Bloomington, Indiana
          Ph.D, Educational Psychology and Special Education

1993   Eastern Michigan University, Ypsilanti, Michigan
          M.S., Special Education-Emotional Impairment
          Michigan Elementary Provisional Teaching Certificate
          K-12 Endorsement in Special Education
          Dean's List 1992 and 1993

1986   University of Michigan, Ann Arbor, Michigan
          B.A., Psychology
          Graduated with distinction

PROFESSIONAL EMPLOYMENT

8/99-Present   Research Associate
          Indiana Institute on Disability and Community
          Indiana University, Bloomington

8/98-5/99   Graduate Assistant
          Indiana Institute on Disability and Community
          Indiana University, Bloomington

7/98 - 6/99   Graduate Research Assistant
          Department of Curriculum and Instruction
          Project EXIT
          Indiana University, Bloomington

8/95-5/98   Associate Instructor
          Department of Curriculum and Instruction
          Indiana University, Bloomington

8/94 - 5/98	Supervisor of Field Experience and Student Teaching
	Office of Student Teaching
	Indiana University, Bloomington

1/93 - 6/94	Middle School Teacher
	Ann Arbor Public Schools
	Ann Arbor, Michigan

8/92 - 1/94	Adult Education Teacher
	Center for Forensic Psychiatry
	Ypsilanti, Michigan

1/92 - 4/92	Teacher
	Alcohol Misuse Prevention Study
	University of Michigan, Ann Arbor

8/87 - 6/90	High School Teacher
	Van Buren Public Schools
	Belleville, Michigan

10/81 - 9/87	Psychiatric Care Worker
	Adolescent Psychiatric Hospital
	University of Michigan, Ann Arbor

CONCURRENT PROFESSIONAL EXPERIENCE

2004-2005	Co-Coordinator: Mentor Teacher Training Program
2004	Guest Panelist: Overseas and Cultural Immersion Student Teacher Program
2003	Guest Lecturer: F400 Community of Teachers Field Based Seminar
1999-2001	Chair: Executive Committee of Graduate Women Educators Network
1999-2000	Coordinator: Model Demonstration Project of Effective School-wide Behavior Support
2000	Guest Lecturer: K341 Special Education: Programming at the Secondary School
2000	Guest Lecturer: M314 General Methods for Secondary Teachers
1999	Guest Lecturer: F400 Community of Teachers Field Based Seminar
1999	Guest Lecturer M314 General Methods for Secondary Teachers
1996-1999	Committee Member: Executive Committee of Graduate Women Educators Network
1999	Guest Lecturer: K535 Assessment/Remediation of Mild Disabilities
1998-99	Committee Member: Graduate Program Committee

1998-99	Committee Member: Ad-hoc Committee Investigating a Dual Certification Program at Secondary Level
1998	Guest Lecturer: M314 General Methods for Secondary Teachers
1998	Guest Lecturer: X401 Critical Reading in Content Areas
1997	Discussion Facilitator: IU Diversity Workshop for Incoming AI's
1997	Guest Panelist: P251 Educational Psychology for Teachers
1996-97	Committee Member: Graduate Program Committee
1996-97	Volunteer: Friends Learn with Mentoring

SELECTED PRESENTATIONS

Washburn, S. (2004). Workshop Series: Understanding Behavior and Supporting Individuals, Special Parents Advisory to Richmond Community Schools. Richmond, IN.

Washburn, S. (2004). Using Praise Effectively and Teaching Strategies for Students with Significant Challenges, Morrison-Mock elementary School. Muncie, IN.

Washburn, S. & Held, M. (2004). Designing Supports for Individuals with Behavioral Challenges, East Roundtable Teacher Workshop. Muncie, IN.

Washburn, S. (2004). Function-Based Support Planning, State Autism Team Training. Bloomington, IN.

Washburn, S. (2004). School-wide behavior support: Focus on the Environment. Indiana Council for Special Education Administrators Spring Conference. Indianapolis, IN.

Washburn, S. (2003). School-wide behavior support: Focus on the Environment. Indiana Association for School Principals Fall Conference. Indianapolis, IN.

Washburn, S., & Pratt, Cathy. (2003). Functional Behavioral Assessment and Positive Behavior Support: Implementing Best Practices in Schools. Regional Workshops throughout Indiana.

Washburn, S. (2003). Designing Effective Support Planning. State Autism Team Training, Bloomington, IN.

Washburn, S., & Horner, R., (2002). Indiana Initiative on School-wide Positive Behavior Support. Carmel, IN.

Washburn, S. & Buckmann, S. (2002). Pre-conference Workshop: Function-Based Support Planning, Autism Society of America National Conference. Indianapolis, IN.

Washburn, S. & Buckmann, S. (2002). Initial Inquiry to Understanding Behavior. State Autism Team Training. Bloomington, IN.

Washburn, S. & Buckmann, S. (2001). Designing Effective Support Planning. State Autism Team Training. Bloomington, IN.

Buckmann S., & Washburn, S. & (2000). Pre-Conference Workshop: Functional Behavioral Assessment and Positive Behavior Support: Implementing Best Practices in Schools. Autism Society of America National Conference. Atlanta, GA

Washburn, S. & Buckmann, S. (2000). School-wide Positive Behavior Support. Two day Workshop for Indianapolis Public Schools. Indianapolis, IN.

Washburn, S. (2000). Teaching as Caring Relations: Understanding the Contextualized Work of Teachers in Collaboration. American Educational Research Association. New Orleans, LA.

Washburn, S. & Buckmann, S. (2000). Initial Inquiry to Understanding Behavior. State Autism Team Training, Bloomington, IN.

Buckmann, S. & Washburn, S. (1999). Understanding Behavior: Functional Behavioral Assessment and Positive Behavior Support. Two day staff development. Washougal, WA.

Brantlinger, E., Washburn, S., & Morton, M. L. (1999). Moral Control Over Social Spaces in School. American Educational Research Association. Montreal, Canada.

Manset, G., Washburn, S., & Qualley, M. (1999). School-level Factors as Predictors of Success on Minimum Competency Graduation Examinations for Secondary Students with Mild Disabilities. American Educational Research Association. Montreal, Canada.

Washburn, S. (1999). Framing Relationships: Understanding the Contextualized Work of Teachers. International Research Colloquium on Inclusive Education. Rochester, NY.

Washburn, S. (1998). Collaborative Teaching and Relationship Building: A Case Study in Effective Special Education Practice. Bergamo, Journal of Curriculum Theory Conference. Bloomington, IN.

PUBLICATIONS

Manset-Williamson, G., & Washburn, S., (2002). Administrators' Perspectives of the Impact of Mandatory Graduation Qualifying Examinations for Students with Learning Disabilities. *Journal of Special Education Leadership*, 15(2), 49-59.

Washburn, S., Burello, L., & Buckmann, S. (2002). Schoolwide behavioral support: A resource guide for facilitators. Bloomington, IN: Indiana University, Forum on Education.

Brantlinger, E., Morton, M. L., & Washburn, S. (1999). Moral authority over social spaces in schools: (Re)distributing gendered power. *Elementary School Journal, 99,*(5)*, 491-504.*

Manset, G., & Washburn, S. (2000). Equity through accountability? Mandating minimum competency exit examination for secondary students with learning disabilities. *Learning Disabilities Research and Practice*, 15(3), 160-67.

PROFESSIONAL ORGANIZATIONS

2003- Present Association for Positive Behavioral Supports
2001-Present   Association for Supervision and Curriculum Development
1996-Present   American Educational Research Association
1995-Present   Council for Exceptional Children
1994-1996   American Psychological Association

AWARDS

1997   Outstanding Associate Instructor Award, Indiana University School of Education, Bloomington, IN