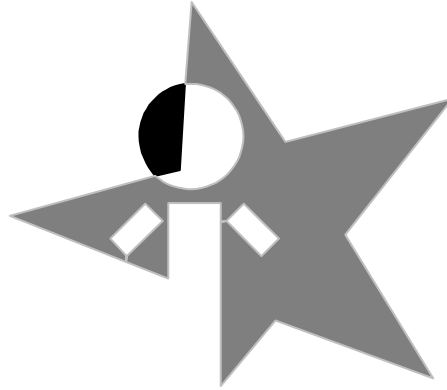# *Effective Teaching and At-Risk/Highly Mobile Students:*
What Do Award-Winning Teachers Do?

Case Studies of Award-Winning Teachers of At-Risk/Highly Mobile Students

Prepared for the National Center for Homeless Education

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EXECUTIVE SUMMARY

This study was designed jointly between the National Center for Homeless Education (NCHE) and researchers at The College of William and Mary. The project was funded through NCHE and was designed to explore a critical factor in working with at-risk/highly mobile students – the teacher. The researchers on this team had prior experience in developing and implementing teacher evaluation systems in various states, which is important as a context for thinking about different views of what constitutes teacher quality. The researchers also have been involved in a variety of studies related to teacher quality, including a similar international comparative study examining the teaching practices and beliefs of national and international award-winning teachers.

The first goal of this study was to examine the literature related to effective teaching and at-risk/highly mobile students (Phase I). The second goal was to identify six teachers who had won national and/or state awards for working with these populations of students and secure their participation in the study (Phase II). The third goal was to explore the beliefs and practices of the six teachers who agreed to participate (Phase III).

This report represents the product of this research endeavor. The report is organized into five major sections:

- *Section 1* provides the context for the study, including background and overview of the study.
- *Section 2* includes a review of the literature related to effective teaching and working with at-risk/highly mobile students and provides the framework for the study.
- *Section 3* describes the methods used for participant selection, a description of each participant included in the study, instruments used in the study, data collection techniques and data analysis techniques.
- *Section 4* details the results of the research project including data from observations and interviews with the award-winning teachers.
- *Section 5* focuses on a summary and discussion of the findings from the interview and the in-class observations. Recommendations are made based on the findings.

Phase I of the study included the development of a comprehensive review of the existing literature, focusing on empirical studies regarding the characteristics of effective teaching and at-risk/highly mobile students. The literature review focused on providing background on at-risk/highly mobile students as well as the personal qualities and effective practices of teachers in working with these populations of students. The effective

practices were examined in terms of three distinct student needs which included affective needs, academic needs, and technical needs.

In Phase II of the study, teachers were identified to participate. The identification was determined by winning of a national and/or state award. Teachers were selected based on the following factors:
- Recognized state or national awards for teaching excellence, and
- Teaching in schools whose student population can be characterized as highly mobile, homeless, and/or high poverty.

Phase III, a key aspect of the study and the focus of this research report, involved six case studies of classroom teachers who teach students placed at-risk and/or are highly mobile and who are identified as highly effective, as determined by their recognition at the national and/or state level for working with these populations of students. The essential question addressed in this phase was what distinguishes effective teachers of at risk students/highly mobile students. Frameworks of "effective teaching" characteristics were adapted from prior research and a review of the literature from Phase II. These frameworks were used to gather on-site classroom observational and interview data from identified teachers. The data collected were examined in light of the extant research related to teaching students placed at risk or who are highly mobile.

The interview data yielded valuable information regarding the beliefs and practices, in the words of the effective teachers. These findings included:
- Teachers focused on both affective and academic needs, with a majority of comments focused on academic needs.
- Teachers' responses focused on two main areas of teacher effectiveness: the importance of student/teacher relationships and instructional delivery.
- The affective and technical needs of students yielded nearly half of the teacher as a person codings from the interview data. These teachers reflected upon affective and academic needs in similar proportions when describing elements of classroom management, and included technical needs in their planning process. Monitoring of student progress included students' affective needs as well academics with nearly a third of monitoring coding.
- A qualitative analysis of the interview data found that teachers focus on student needs while maintaining an academic focus. They have high expectations of students and are committed to ensuring that students had what they needed to succeed.

The in-class observation data reflected the teacher beliefs and practices gleaned from the interviews. In summary, the teachers maintained high student engagement, used a variety of instructional activities, and focused on a wide range of cognitive levels in the questions asked as well as the

instructional activities. Mostly, the instruction was teacher-directed and teachers asked a significant majority of the questions recorded.

The report concludes with recommendations for further study including additional research into effective teaching and working with at-risk/highly mobile students.

ABOUT THE RESEARCH TEAM

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Dr. Grant is a Visiting Assistant Professor in the Curriculum and Instruction Area at The College of William and Mary in Williamsburg, Virginia. Among her primary research interests are:

- State assessments and student opportunity to learn
- Use of valid and reliable assessments for and of student learning

She was a contributing author to James Stronge's book, *Qualities of Effective Teachers*, 2nd edition and co-authored *Teacher-Made Assessments: How to Connect Curriculum, Instruction, and Student Learning* Specifically, she contributed sections in each chapter related to effective teachers and at-risk and high ability learners. She is currently involved in an international comparison research project examining the practices and beliefs of teachers who have won national and international awards. Leslie received her doctorate from The College of William and Mary in Educational Policy, Planning, and Leadership.

James H. Stronge, Ph.D.

Dr. Stronge is Heritage Professor in the Educational Policy, Planning, and Leadership Area at The College of William and Mary in Williamsburg, Virginia. Among his primary research interests are:

- Teacher effectiveness and student success and
- Teacher and administrator performance assessment.

Relevant publications include 18 books and approximately 80 journal publications and technical reports. Additionally, he has made presentations and provided consulting assistance for numerous international, national, state, and local educational organizations. One of his books, *Qualities of Effective Teachers*, published by the Association for Supervision and Curriculum Development, serves as the framework for this study. His doctorate is from the University of Alabama in Educational Administration and Planning.
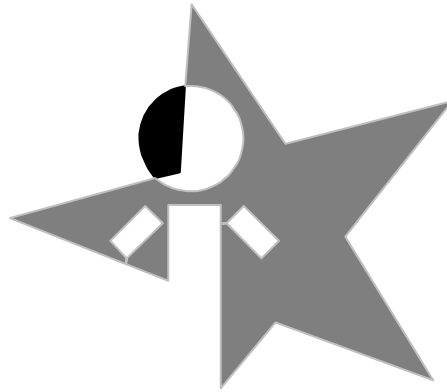
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Dr. Popp is the state coordinator for the education of homeless children and youth in Virginia and an adjunct professor in the Curriculum and Instruction Area at The College of William and Mary in Williamsburg, Virginia. Among her primary research interests are:

- Homeless and highly mobile students
- Students with learning disabilities

Among her publications, she has co-authored *The Local Homeless Education Liaison Toolkit* and *Students on the Move: Reaching and Teaching Highly Mobile Children and Youth* for the National Center for Homeless Education. Pat is a past president of the National Association for the Education of Homeless Children and Youth and currently serves as the chair for the NAEHCY LeTendre Education Fund. Pat received her doctorate from The College of William and Mary in Educational Policy, Planning, and Leadership with an emphasis in special education.

SECTION 1

BACKGROUND OF THE PROJECT

Introduction

Anyone who has ever had an outstanding teacher knows, emphatically, that teachers matter. What we have known intuitively all along, we now know empirically: there is a direct, measurable link between teacher effectiveness and student success. In recent years, an empirical base has been developed which clearly indicates that the quality of teaching is a major determinant of gains in student learning. What we need to better understand, however, is what the most effective teachers *do* which results in substantial academic growth of students.

The purpose of this study was to examine what constitutes effective teaching – teaching that has been recognized through national and/or state awards as being particularly effective with at-risk/highly mobile students. Specifically, *what* do the best teachers do which makes such a difference in working with students placed at risk? By the term, *at risk*, we primarily mean students who, because of various environmental factors beyond their control (e.g., homelessness, high mobility, poverty), have an increased likelihood of experiencing challenges in attending, succeeding, and remaining in school.

The question of effective teaching has been researched for decades; nonetheless, the question remains quintessential for understanding student learning. In this study, we identified six award-winning teachers of at-risk and/or highly mobile students, and then investigated and analyzed the actual teaching practices of the teachers and their beliefs about teaching. The intent of this study is to analyze what these award-winning teachers do that makes them makes them stand out as effective teachers of at-risk/highly mobile students.

The key objectives of the project were:
1. to assimilate and synthesize extant research regarding what is effective teaching and its connection to student learning within the context of working with at-risk/highly mobile students, and,
2. to identify the behaviors and practices that characterize highly effective teachers of at-risk/highly mobile students.

Significance of the Study

"…nothing, absolutely nothing has happened in education until it has happened to a student."[1] As suggested in this quote, reforming American education is about enhancing learning opportunities and results for students. The educational challenge facing the United States is not that its schools are not as good as they once were. It is that schools must help the vast majority of young people reach levels of skill and competence that were once thought to be within the reach of only a few.[2] While various educational policy initiatives may offer the promise of improving education, nothing is more fundamentally important to improving America's schools than improving the teaching that occurs everyday in every classroom. In order to truly make a difference in the quality of American education, we must be able to provide ready and well-founded answers for parents who ask the question, "Does my child have a good teacher?" and for the teachers who ask themselves, "Am I a good teacher?"

The importance of this project, *Effective Teaching and At Risk/Highly Mobile Students: What Do Award-Winning Teachers Do?* is to identify characteristics and behaviors of teachers of at risk students who are identified as highly effective. By focusing on the hallmarks of effective teaching, we can be equipped to educate teachers more expertly, to set meaningful performance expectations once teachers are in classrooms, and to evaluate and reward teachers more fairly.

Contribution of Study to the Field

Over the past few decades, numerous studies have focused on defining the characteristics of effective schools and teachers. More recently, research has focused on the value-added connection between teaching and learning, with leading examples of this assessment process including the Tennessee Value-added Assessment System and the Dallas Independent Public Schools.[3] Analysis of data from these and other programs offers dramatic evidence regarding the influence of the classroom teacher on student learning:

- Teachers produce a strong cumulative effect on student learning. For example, students placed with highly effective teachers three years in a row, beginning in third grade, scored 52 percentile points higher (96th vs. 44th percentile) on Tennessee's state mathematics assessment than students with comparable achievement histories who were places with three low performing teachers.
- There is a powerful residual effect on student learning based on the quality of the teacher. Data from Dallas reveal that if a student has a high performing teacher for just one year, the student will remain ahead

of peers for at least a few years of schooling. Unfortunately, if a student has an ineffective teacher, the influence on student achievement is not fully remediated for up to three years.

- There is evidence that lower-achieving students are more likely to be placed with lower effectiveness teachers. Thus, the neediest students are being instructed by the least capable teachers.

Clearly, the single most influential school related factor affecting student achievement gains *is* the teacher. Nonetheless when we ask, "How do effective and ineffective teachers differ?" we cannot affirmatively answer. While there may be suppositions and anecdotal data, "… we really do not know what patterns of behavior and practice differentiate one group from the other. In other words, we don't know how to prepare effective teachers or help those who are less effective become more effective."[4]

Extensive work has been done in synthesizing what is known about the qualities of effective teachers, in general.[5] However, little evidence has been assimilated regarding the qualities of teachers of at risk students. This project served to help fill this void.

Overview of the Study

Although some policy makers periodically have suggested that schools have little impact on student learning, recent studies indicate that schools and their efforts do make a difference, and much of that difference can be linked directly to teachers.[6] Virtually all of us can recite the names of teachers we have had who have played significant roles in our learning and lives - sometimes significant even to the point of career changing. One researcher who examined the autobiographies of 125 prominent Americans from the 19th and 20th centuries found that they consistently described good teachers in their lives as having "competence in the subject matter, caring deeply about students and their success, and character, distinctive character."[7] Undoubtedly, there are vital qualities that epitomize good teachers – and one of those qualities is the ability to make a difference in students' lives.

The *Effective Teaching and At Risk/Highly Mobile Students: What Do Award-Winning Teachers Do?* project addressed the problem of what is an effective teacher in three distinct phases:

Phase I: Comprehensive Review of Existing Research

Phase I of the study included the development of a comprehensive review of the existing literature, focusing on empirical studies regarding the characteristics of effective teaching. This literature review can be found in Section 2 of this report.

Phase II: Identification of Effective Teachers

Phase II of the study included the identification of highly effective classroom teachers of students placed at risk and/or who are highly mobile. For this study, we defined an "effective teacher" as one who has won a national and/or state award for working with at-risk and/or highly mobile students. Teachers were selected based on the following factors:

- Recognized through state or national awards for teaching excellence
- Teaching in schools whose student population can be characterized as high mobility, homelessness and/or high poverty

Phase III: Field-Based Study of Effective Teachers

Phase III, a key aspect of the study, involved six case studies of classroom teachers who teach students placed at-risk and/or highly mobile students and who were identified as highly effective through winning a national and/or state award. The essential question addressed here is what distinguishes effective teachers of at-risk students. Frameworks of "effective teaching" characteristics were adapted from prior research. These frameworks were used to gather on-site classroom observational and interview data from identified teachers. Specifically, the teacher case studies focused on:

- teacher background characteristics (e.g., years' experience, highest degree earned),
- teacher in-class behaviors, including instructional techniques, questioning strategies, student engagement, and cognitive levels of instructional activities associated with qualities of effective teachers,
- a semi-structured interview with each teacher (see Appendix A), and
- one classroom observation of each teacher selected by observers trained in the use of the classroom and data collection protocol (see Attachment B).

The three phases of the project, along with the above-described methodology, are summarized in Table 1.1.

Table 1.1. *Project Overview, Phases and Activities*

Project Phases	Primary Activities
Phase 1: Literature Summary	Identification of Resources • Literature search • Cross-reference sources • Locate materials Literature Synthesis • Review literature • Summarize findings of individual studies • Synthesize results
Phase 2: Identification of Highly Effective Classroom Teachers of At Risk and/or Highly Mobile Students	Identify Effective Teachers • Determine methods for identifying effective teachers (e.g., state or national award-winning teachers, student achievement data, or other sources) to be used; collect data Identify teachers to participate in the study
Phase 3: Case Studies of Classroom Teachers	Instrument Development • Refine observational items for the classroom based on literature and perceptual feedback • Refine format for observational protocol and demographic data collection Data Collection • Schedule on-site visits for classroom observations • Conduct observations and interviews Data Analysis • Tabulate data and conduct analyses, interpret results, and summarize findings

SECTION 2
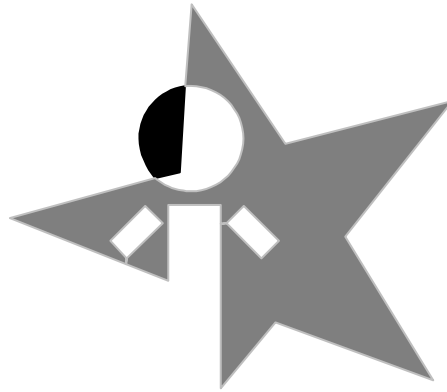
REVIEW OF THE LITERATURE

Researchers use indicators of student achievement to determine the quality of education a student receives or the likelihood that a student is at-risk of dropping out of school. Factors related to the school, society, and family can impact whether a child will be more at-risk than another student. A student who at risk not only has more of a chance of dropping out of school but is also more likely to be retained and to require remediation in basic skills. At-risk students are also more likely to enter school with learning deficits.[8]

There are varying definitions of highly mobile. Some researchers have included students who change schools more than six times in their K-12 education[9]; others included students who moved more than once a year.[10] Many highly mobile students move even more frequently than the baseline accepted by researchers. Students who are homeless, members of migrant worker families, living in poverty, children in foster care, and children whose parents are in the military are among our most mobile students. Depending on the reason(s) for moving frequently, highly mobile students can be among the highest risk. For example, a study of students who experienced homelessness and students who had homes but whose families received public assistance revealed that formerly homeless students experienced decreased achievement during the time period of homelessness as compared to the students who were housed.[11] The researchers explained that, "Because poor children who are housed fare worse than middle class children on similar measures, some authors have suggested that homelessness represents the extreme end of the continuum."[12] However, not all mobility leads to the effects described above. For example, students in Department of Defense (DOD) Schools experience high mobility but still experience academic success.[13] DOD schools are explored in this literature review in an effort to explore an example of high mobility *not* associated with lower academic achievement.

One of the factors widely used as a determinant of school success is a quality teacher.[14] This review of the literature examines quality teaching through a framework of the special needs of students who are at risk of school failure because of high poverty or because of high mobility. First, the review of the literature defines the population of students that are a part of the study. The review then explores the personal qualities of teachers that are associated with effective teaching. The practices of effective teachers of at-risk and highly mobile students are then explored in three student needs areas. These needs are categorized in the following manner: affective needs, cognitive needs, and technical needs. In this framework, the qualities that define effective teaching for the general population of students are examined along with characteristics that define effective teaching for students placed at-risk, including highly mobile students.

As would be expected, the literature regarding effective teachers of at-risk students is more plentiful than literature specifically related to effective teachers of homeless and highly mobile students. Nonetheless, the research and literature related to at-risk students can serve to inform the discussion surrounding the characteristics of effective teachers for homeless and highly mobile students. Moreover, the lack of sufficient literature related to effective teachers of highly mobile students underscores the need for this research study.

This literature review is a representative sample of the research on effective teachers and effective teaching with at-risk/highly mobile students. The studies and relevant extant literature included in this review were selected due to their connection to at-risk and/or highly mobile students and to their connection with the framework presented further in the literature review. Databases of research studies, including ERIC were searched using key terms related to the framework which formed the foundation of the study.

Background on At-Risk/Highly Mobile Students

Many factors contribute to a student being termed "at-risk." At-risk students are students who lack support to succeed in one or more the following areas: societal, familial, and/or school. Home and societal factors include student mobility, living in poverty, and hunger and nutrition. School factors include qualified teachers, rigorous curriculum, school climate, and school safety.[15] Therefore, students who are highly mobile are also in danger of not succeeding in schools. The needs of the students explored in this literature review include students who are generally at-risk, students who are children of migrant workers, children who are homeless, children in foster care, and children who are military dependents who can be highly mobile, yet less likely to experience academic risk. These students are frequently highly mobile.[16] For the purposes of this study, we will consider students who move (school or residential) an average of once a year.

One of the factors leading to a child being termed at-risk is poverty. In 2005, the Census Bureau reported that 17.6% of children (under 18 years of age) were living below the poverty level,[17] with 16.2% of school-age children living in poverty.[18] These percentages indicate that, depending on the school district, an average of 16 out of 100 students are at-risk of school failure. Children from minority families are more likely to live in poverty than those from Caucasian families. In 2005, approximately 10% of Caucasians lived below the poverty level compared to 24.9% of African-Americans and 21.8% of individuals of Hispanic origin.[19]

Migrant students also are considered at-risk due to high mobility, poverty, and limited English proficiency. One indication of the number of migrant students enrolled in public schools is the Migrant Education Program (MEP) participation count. During the 1999-2000 school year approximately 686,000 students participated in the Title I Migrant Education Program.[20] However, these numbers do not count the number of school-age migrant students who do not attend school, nor students from migrant families attending schools without MEP funding.

In 2000, the Census Bureau collected information to determine the number of individuals living in emergency shelters and transitional shelters, in other words those who do not have homes. The census determined that 170,706 people were living in homeless shelters and of those 43,887 were under 18 years of age.[21] The Census Bureau stressed that these numbers do not represent all individuals living in homeless shelters or those living outdoors and therefore are not representative of the homeless population. Looking at a broader population of children and youth experiencing homelessness, the United States Department of Education, in its 2006 Report to the President and Congress found that states, through school child counts, identified over 600,000 children in grades kindergarten through twelfth during the 2003-04 school year using the definition of homeless included in federal education legislation.[22] These numbers give an indication of the number of children who attend public schools and do not have a home.

Children who are part of military families are also considered highly mobile; however, they are not necessarily considered at a high risk of school failure. At Department of Defense Schools (DOD), the transient rate was 35% in 2003. Approximately 105,000 students are enrolled in Department of Defense Schools, with 54% minority. Students in DOD schools scored *above* the national average at each grade level on the 2003 CTB/Terra Nova Achievement Test in the areas of reading, language arts, mathematics, science, and social studies. On the 2003 National Assessment of Educational Progress (NAEP), minority students in DOD schools scored considerably better than minority students in most states.[23]

Teacher Personal Qualities and At-Risk/Highly Mobile Students

Teachers come to the teaching profession with background characteristics that include subject matter and pedagogical preparation, certification, and experience. These factors have been shown to have a relationship to student achievement. The Illinois Education Research Council created a Teacher Quality Index (TQI) to examine the personal qualities that teachers possess that have been associated with increased student

achievement. The TQI takes into account five factors: college from which the teacher graduated, the number of years of teaching experience, type of certification, ability on Basic Skills tests, and verbal ability as measured by the ACT.[24] These five factors are associated with student achievement.[25]

Unfortunately, in areas where high quality teachers are needed the most, students often have teachers who do *not* meet the standards for effective teaching.[26] As Peske and Haycock stated,

> Unfortunately, rather than organizing our educational system to pair these children with our most expert teachers … the very children who most need strong teachers are assigned, on average, to teachers with less experience, less education, and less skill than those who teach other children.[27]

Studies of teacher quality in poor and minority communities and communities which serve a large migrant population reveal that these students are more likely to be taught by teachers who have lower academic ability themselves, are uncertified and teaching out of field, and are inexperienced.[28] Students who are at risk of dropping out of school are more likely to be taught by teachers who scored in the lowest quartile on the SAT and ACT for college admissions.[29] A study of the relationship between remedial course taking by teachers of poor and minority students found a significant relationship between the achievement levels of students and the number of remedial courses in mathematics, reading, and writing taken by new teachers.[30] Research supports that these factors such as the remedial courses in reading and writing, which are indicators of verbal ability, are related to student achievement.[31] However, many poor and minority students do not have access to teachers who exhibit high verbal ability. At-risk students themselves recognize the ability to communicate subject matter well as a characteristic of a highly effective teacher of at-risk students.[32] From a review of empirical studies, Rice asserts, "high-quality teachers, as measured by the selectivity of the higher education institution they attended, degrees attained, and test scores, are most important for minority and disadvantaged students."[33]

Students who are at risk also are more likely to be taught by teachers who lack content knowledge of the subject matter that they are teaching and who lack preparation in teaching. The Educational Testing Service published a study that examined correlates of student achievement to explain the achievement gap for poor and minority students. Teachers in schools with high percentages of poor and minority students were more likely to lack a major or a minor in the subject area they were teaching than teachers in schools with lower percentages of poor and minority students.[34] Likewise, poor and minority students were more likely to have

teachers who were not certified to teach and were underprepared.[35] A study examining Title I schools that served large populations of migrant students revealed similar findings. More teachers in schools with a medium to high number of migrant students lacked certification in the fields in which they taught or they held emergency certification.[36]

Studies that examine the connection between content knowledge and teacher certification and preparation indicate that a relationship does exist. In other words, students of teachers who have subject matter content knowledge and who are certified to teach perform better than teachers who lack knowledge of the content and are not certified.[37] The benefits of subject matter knowledge are clear. Singham explained,

> It is easy to understand the benefits to a teacher of having good content knowledge. It is extremely hard for teachers to teach with flexibility and resourcefulness if they themselves are having difficulty understanding the content they are teaching. Teachers do not have to be content experts, but they do need to have a sufficient level of comfort with the materials.[38]

The lack of content knowledge on the part of the teacher and the lack of preparation contribute to the continuing gap between the wealthy and the poor and the majority and the minority. Teachers of at-risk students recognize the importance of knowing the subject that they teach.[39]

While teachers must have subject matter knowledge, they must also know *how to teach* the subject. Some studies have shown a relationship between what is known as pedagogical content knowledge or how to teach subject matter and student achievement, as well as continuing professional development and student achievement.[40] In Department of Defense (DOD) Schools in which students are labeled "highly mobile," continuing professional development is a part of the overall school culture.[41] Teachers receive training on a range of topics such as meeting individual student needs and monitoring student progress. Students who attend DOD schools outperform their peers although they are from similar socio-economic backgrounds. Additionally, teacher training in using a variety of instructional materials was found to be related to student achievement.[42] Knowing the subject matter and how to teach it impacts student performance.

Literature related to the teaching of highly mobile students reveals that professional development is needed to provide teachers with the tools to meet the unique needs of their students. A study of teachers in Title I schools serving high numbers of migrant students revealed that 65 to 75 percent of these teachers reported that they had not received any training on instructional strategies to meet the needs of migrant students. Between 60 percent and 84 percent of teachers reported that they would like to

receive professional development in effective instructional strategies to meet their students' needs. Experts in the field recommend that teachers receive training regarding the cultures of the students they serve, as well as training in remedial reading, English as a Second Language, and the Spanish language.[43]

A final personal quality is teacher experience. Students of teachers who are new to the profession do not perform as well as students of teachers who have experience although the benefit of experience levels off after approximately eight years.[44] A study of correlates to student achievement revealed that poor and minority students were more likely to have a teacher with less than three years experience than schools with lower percentages of minority and poor students.[45] A study of migrant students yielded similar results. Teachers in schools with a large proportion of migrant students were less experienced than teachers in schools with lower proportions of migrant students. In schools with the highest poverty levels, between 15 and 21 percent of the teaching staff had less than three years experience, while the percentage in lower poverty schools was between eight and nine.[46]

Research exploring the personal qualities of teachers and students who are at-risk indicates that these students do not have access to teachers of the same quality as students from higher income and more stable environments. However, research regarding prerequisites to teaching for highly mobile students is lacking. While studies related to personal qualities of effective teachers and at-risk students informs the discussion surrounding students who are highly mobile, they do not address the relationship between personal qualities of effective teachers and those students who are highly mobile .

Effective Teachers and the Needs of At-Risk/Highly Mobile Students

Affective Needs

At-risk and highly mobile students have unique affective needs. Due to high mobility and living in an unstable environment, these students may experience frustration, isolation, and lack of motivation to succeed.[47] The literature regarding effective teaching abounds with studies on how teachers create a stable, caring learning environment.

Effective teachers of at-risk and highly mobile students meet affective needs by caring for students, being fair and respectful toward students, interacting with students, being enthusiastic and motivating, having a positive attitude toward teaching, and being reflective practitioners.[48] Studies of at-risk and/or highly mobile students in this portion of the

literature review reveal that factors related to meeting the affective needs of students are important in understanding the persistence and achievement of those students who might otherwise drop out of school.

Several studies sought the input of at-risk students themselves in identifying characteristics of highly effective teachers.[49] These studies revealed that students described effective teachers as caring, dedicated, motivating, encouraging, nurturing, supportive, and respectful. Researchers in one study concluded that teacher caring was a major discriminating factor of effective teachers.[50]

Caring about students also includes social interactions with students and getting to know students on an individual basis.[51] Educators have described effective teachers of at-risk students as those who develop a personal relationship with students and have an understanding of their students' various backgrounds.[52] Effective teachers also get to know families on a personal basis and so have an understanding of the issues facing the family. In a qualitative study which examined four school districts which effectively served a large population of migrant students, researchers found that school staff built personal relationships with families and so developed an increased level of empathy.[53]

The teacher as a person also relates to the teacher's own views toward students, the subject matter they teach, and the teaching profession itself.[54] Effective teachers are enthusiastic, motivating, and have a positive attitude toward teaching. They reflect on their practice and strive for ways to improve. Studies of effective teachers of at-risk students reveal that these teachers believe that they can make a difference in the lives of their students.[55] A study of teacher-efficacy found that a stronger relationship existed between a teacher's sense of self-efficacy and lower-achieving students' perceptions on their own mathematics performance than between the teacher's sense of self-efficacy and higher-achieving students' perceptions of their mathematics performance. Researchers stated that, "The fact that teacher efficacy beliefs have a stronger impact on low-achieving than on high-achieving students is especially provocative given the tendency to assign teachers with a less positive sense of efficacy to groups of low-achieving students."[56]

The belief that one can make a difference translates into actions associated with the belief. Studies of these actions indicate that effective teachers of at-risk students motivate students to learn, are enthusiastic about learning, provide a supportive environment, and exhibit supportive behaviors such as staying late, coming in early, and making a commitment to student success.[57] For highly mobile students, teachers have a smaller window of time within which to provide the support. Therefore, creating a supportive

environment for students who may be in the teacher's classroom for one week, one month, or six months is critical.[58]

A supportive environment also includes managing the classroom effectively. An effective teacher manages the classroom expertly by creating a positive learning environment, organizing to reduce disruption, and responding appropriately when disruptions occur.[59] These aspects of effective teaching for the general population apply to at-risk students as well. Numerous studies have found that effective teachers of at-risk students create a positive, inviting classroom environment.[60] One researcher developed the term "warm demanders."[61] Teachers had high expectations of student work and behavior and provided the support for students to succeed. Effective teachers also create orderly classrooms. A study of at-risk children, found that the maintenance of orderly classrooms was significantly related to the reading achievement of students.[62]

Students themselves understand the benefits of a classroom environment in which behavior disruptions are minimal. One survey of urban youth revealed that these students viewed an effective teacher as one who maintained control of the classroom.[63] Studies of effective teachers support these students' views. Effective teachers articulated classroom expectations both for school work and for behavior and responded in a consistent manner to disruptions.[64] They had a calm and quiet management style and provided quiet reminders of appropriate behavior such as a hand on a shoulder, proximity to the student, or eye contact.[65] In Department of Defense schools, where students achieve beyond students of similar socio-economic backgrounds in public K-12 schools, teachers implement discipline plans promptly when the school year begins.[66] Furthermore, a study of common factors of 21 high-poverty, high-performing schools found that teachers encouraged students to maintain self-control in the classroom.[67] Students who are highly mobile need time to adjust to the new environment in which they find themselves. Therefore, if the classroom environment is chaotic, feelings of anxiety among highly mobile students may be exacerbated.[68]

In working with students experiencing homelessness or high mobility, traditional techniques for classroom management may need to be modified. Techniques such as creating classroom rules together are common in many classrooms. However, when students enter and exit the classroom midyear, rules cannot be recreated with students as the population shifts. Finding ways to communicate rules and procedures quickly to highly mobile students can limit disruptions to classroom management. Other techniques, such as solving behavior problems as a class and providing students with the opportunity to take time out for themselves are effective ways to manage the classroom that may apply to stable and mobile classrooms.[69] While the teacher continues to maintain

high expectations the approach to classroom management may be different from those traditionally used. For example, solving behavior problems as a class requires a climate of trust between the teacher and students. Teachers must find ways to ensure that new students acclimate quickly to reduce the possibility of discomfort in such a process.

Academic Needs

Children who are at-risk of school failure have great academic needs. Students who are highly mobile can take up to half a year to academically adjust to moving to a new school with a larger cumulative effect on achievement with each additional move.[70] In meeting the academic needs of highly mobile students teachers must have the ability to assess and plan for students needs, deliver instruction effectively, and assess student learning.

In order to meet their academic needs, teachers of highly mobile students must possess the ability to assess students when they first arrive in the classroom.[71] Additionally, assessing students in their native language can enhance the ability to accurately place students.[72] For example, migrant students at the secondary level are often placed inappropriately for their age or grade.[73] In a study of 21 high performing, high poverty schools, researchers found that teachers used testing a regular part of the curriculum.[74] Other studies document similar results. A review of high performing schools in which most of the students would be deemed "at-risk" found that teachers focused on making decisions regarding instruction based on data.[75] With students who are highly mobile, teachers need to assess where the students are in order to help them move forward academically.

Teachers also meet the academic needs of at-risk highly mobile students by planning for instruction that is rigorous and makes appropriate use of time and materials. Planning communicates expectations to students.[76] Planning for instruction involves attending to not only the content of instruction, but also the resource materials to be used, the allocation of time, and maintaining high expectations for student learning.

Effective teachers of at-risk students take into account student needs and experiences as well as the curriculum in planning for instruction.[77] Highly mobile students, as with any students, have a wealth of experiences from which to draw. In DOD schools, teachers of students from military families who have traveled to other states and countries capitalize on these experiences. They celebrate the diversity of locations and acknowledge the mobility as a normal part of the school culture. Research shows that when teachers incorporate student experiences and cultures, students view

themselves in a more positive light.[78] When time in the classroom may be very limited, units of learning that can be completed in short periods of time may be adopted. In working with homeless students, effective teachers plan lessons in such a way that content and skills can be mastered in a short period of time.[79]

Planning for instruction also involves maintaining high expectations through assignments and exposure to a rigorous curriculum along with high expectations for student work.[80] A group of researchers interviewed urban youth regarding characteristics of effective teachers. These students maintained that effective teachers expected students to complete their work and did not accept excuses.[81] Interviews with educators produced the same results. Students benefited from an atmosphere of high expectations.[82] A study of factors related to drop-out rates revealed that adult expectations of students were strong determinants in predicting the youth that would drop out of school.[83]

The effective teacher of at-risk/highly mobile students meets academic needs by protecting instructional time. A qualitative study of one school's success revealed that teachers were on task every minute in the classroom.[84] Effective teachers ensure that students not only have the resources to learn but the time to learn as well.[85] Lost instructional time was a factor related to decreased achievement.[86] A study of sixth grade students found that students in classrooms in which teachers emphasized time on task had a six point advantage on the National Assessment of Educational Progress over students whose teachers did not emphasize focus during instructional time.[87]

The teaching act itself should meet the academic needs of at-risk/highly mobile students. Effective teachers of at-risk students use a variety of instructional techniques. A survey of low-income students revealed that these students value teachers who are able to teach in a multitude of ways.[88] Educators have also been surveyed regarding the characteristics of effective teachers of at-risk students. Findings reveal that effective teachers meet the special needs of their students by implementing a wide array of instructional techniques.[89]

Techniques that have been found to increase achievement for at-risk students include direct instruction, simulated instruction, and integrated instruction.[90] Integrating technology has also been associated with better academic achievement of at-risk students.[91] Based on the perceptions of teachers, parents, administrators, and students, at-risk students who received instruction in a technology lab performed better than at-risk students who did not. Instruction that includes hands-on activities and cooperative groups has also been associated with increased academic performance.[92] Cooperative learning can be particularly useful for migrant

and homeless students because students encourage each other and support each other.[93] Throughout instruction, effective teachers model and provide scaffolding to support student achievement.[94] While these studies focus on specific techniques and their impact on student achievement, the common thread among the studies is the focus on using a variety of instructional strategies.

Questioning as an instructional strategy has also been found to be effective among at-risk students.[95] A study of reading growth in high poverty schools revealed that the more teachers focused on higher level questions, the better students performed in reading.[96] Teachers also provided wait time for students to reflect on their answers.[97] Questioning is an additional instructional tool for effective teachers of at-risk students.

The complexities of teaching involve the focus on not only the breadth of content and skills that students should possess but also the depth of those same content and skills.[98] Effective teachers of at-risk students focus on meaningful connections rather than isolated facts and ideas.[99] A study of student performance on the NAEP found that when teachers emphasized facts over reasoning, students performed more poorly than those of teachers who emphasized reasoning.[100] A case study of a high performing school with students who would be viewed as at risk found that teachers focused on understanding rather than low level learning.[101]

High engagement and high expectations are additional hallmarks of effective teachers and are communicated in instructional delivery.[102] In a study of reading growth in high poverty schools, researchers found that students performed better in reading comprehension when they were engaged in learning.[103] The study examined nine schools in which the percentage of students receiving subsidized lunch ranged from 70 – 95%. The researchers observed teachers and used Hierarchical Linear Modeling to study the effects of various classroom practices on student reading progress. Teachers in grades 2 through 5 whose students performed better engaged in more interactive strategies such as writing, reading, and questioning. Students who engaged in more passive activities such as taking turns in reading did not perform as well as those in more interactive classrooms.[104]

Additionally, high expectations led to increased achievement. Although this characteristic was examined in the previous section on planning for instruction, it warrants further discussion here. High expectations are evident in teacher plans but also in the execution of those plans.[105] Students from military families experience moves frequently. However, they continue to maintain higher academic achievement than their peers in K-12 public education. One reason for this difference relates to expectations. Teachers in DOD schools have high expectations. In a

survey of African American and Hispanic students attending DOD schools, 85% and 93% respectively believed that their teachers had positive expectations of them. The national sample reveals that 52% of African American students and 53% Latino students believed that their teachers' had positive expectations of them.[106] Studies of schools in which students are beating the odds reveal that these schools have a climate of high expectations.[107] Students are expected to redo work that does not meet expectations set for them.[108] High levels of engagement and high levels of expectation are hallmarks of effective teachers of at-risk/highly mobile students.

Finally, effective teachers meet the academic needs by assessing student learning and providing opportunities to demonstrate student learning. One mainstay of education is the assigning of homework to provide additional practice or exploration of topics discussed in class. Monitoring student progress and potential also relates to the use of various assessment strategies and the feedback that teachers provide to students regarding their progress. The use of assessment information relates directly to responding to the range of student needs and abilities in the classroom. These main areas allow the teacher to effectively assess and diagnose student strengths and weaknesses.[109]

Homework for the at-risk student might be difficult as the home environment may not support homework activities.[110] In a review of research related to homework with lower achieving students, researchers concluded that homework was less effective for this group than for high achieving students.[111] One reason offered is that students leave the classroom without understanding the concepts or skills being taught and so the homework is not independent practice.

For some highly mobile students, such as migrant students and homeless students, the issue of homework can be especially challenging. Experts in the field of education suggest providing homeless students with supplies such as a portable light, clipboard, paper, and pencils.[112] The reliance on homework that involves the use of computers and other ancillary materials may be difficult for these students who lack such resources. While research related to highly mobile students and homework is limited, effective teachers consider such challenges faced by their students when assigning homework.

Students of military families attending DOD schools do not face the same impediments to homework as migrant and homeless students. In DOD schools, homework is an expected part of the school curriculum. Students also have access to supplies needed to complete homework. Therefore, this challenge is minimized for children of military families.

The ability to assess learning and to use learning to provide feedback and to respond to student needs is a hallmark of an effective teacher.[113] Effective teachers use a range of effective strategies and provide corrective and neutral feedback.[114] Teachers of at-risk students provide written feedback on homework and quizzes and they discuss student errors and how they might be corrected.[115] For homeless students, effective teachers provide frequent written progress reports so that students and families know how the student is progressing academically.[116]

Feedback is useful for the teacher in assessing student understanding and in making instructional decisions about how to respond to the range of student abilities in the classroom. A study of reading achievement for students in grades three through six considered at risk revealed that modifying and adapting instruction to meet student needs was a significant predictor of student achievement.[117] Additionally, in a randomly selected sample of second and third grade teachers in Los Angeles Unified School District, researchers found that in SAT/9 language scores, students of teachers who individualized instruction scored better than students of teachers who did not.[118]

Technical Needs

At-risk/highly mobile students have technical needs as well. These needs include receiving social services, correct grade placement, and seeking support from individuals who work with at-risk/highly mobile students.[119] According Maslow's hierarchy of needs, the very basic needs of food, clothing, and shelter must be met before the academic and affective needs can be addressed.[120] When students are present for short time periods, basic, academic, and affective needs may need to be addressed concurrently. Effective teachers address student needs prior to the students arriving in the classroom, when students arrive in the classroom, while they are in the classroom, and even when they leave.[121]

Conclusion

Students who are at a higher risk of dropping out of school, of being retained in grade, or who do not possess basic skills needed for academic success are in need of high quality teachers. Some highly mobile students are at the highest risk.[122] Research studies related to the impact of teachers in these students' lives are few. However literature related to effective teaching in general and effective teaching with at-risk students serves as a basis for examining effective teachers of highly mobile students. Research studies indicate that students in high poverty schools, an indicator of risk, lack a quality teacher in terms of possessing qualifications to teach.[123] Without access to a teacher with these basic qualifications, at-risk and highly mobile students are more likely to continue to fall behind

academically and are more likely to fulfill the definition of at risk by dropping out of school.

Not only must teachers have these basic qualifications but they must also possess positive attitudes toward the students they teach, and possess skills in managing the classroom, planning instruction, delivering engaging instruction, and monitoring student progress.[124] Furthermore, effective teachers of at-risk and highly mobile students must recognize the affective, academic, and technical needs of their students and must respond to those needs. In writing about effective teachers and their impact on students, Tomlinson and Jarvis assert, "When we lift our eyes from the pacing guide long enough to observe the individuals in our classroom, they will often teach us exactly what nourishment they need to thrive."[125] Effective teachers seek to understand the needs of all of their students, including those who are at the highest risk of not experiencing academic success.

SECTION 3
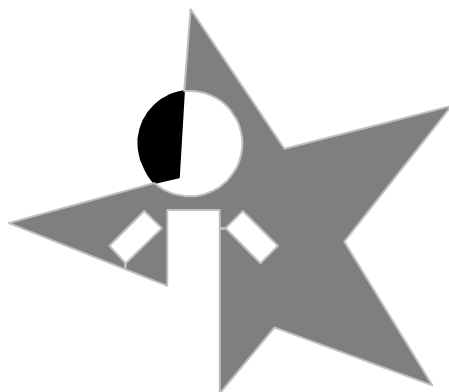
METHODOLOGY

Six teachers were included in this study of effective teaching and at-risk/highly mobile students. The study involved conducting cross-case analyses by identifying and then observing and interviewing six teachers who had won national and/or state awards for working with students who are at-risk and/or highly mobile. The following section describes sample selection, participants, data collection methods, and data analysis procedures.

Participants

Teachers who had won national and/or state awards for teaching at-risk/highly mobile students during the past five years were eligible to participate in the study. Awards included state teacher of the year, Milken Educator Awards, and national organization awards. Two essential criteria were necessary for inclusion in the study:

- Recognized through state or national awards for teaching excellence
- Teaching in schools whose student population can be characterized as high mobility, homelessness and/or high poverty

Researchers examined the information about awardees provided by the organizations, looking for indications that the teachers taught students who were at-risk and/or highly mobile. The researchers purposefully sampled awardees so that elementary, middle, and high school levels were represented as well as differing populations that meet the definition of at-risk and/or highly mobile. Table 2.1 shows the breakdown of participants by grade level and subject. Three elementary teachers, one middle school teacher, and two high school teachers were included in the study. Student populations present in the schools and classrooms of these teachers included students who were at-risk of failure, homeless, children of migrant families, and military dependents.

Table 3.1. *Participants by Grade Level/Subject and Population Taught*

Pseudonym	Grade Level/Subject	Population
Jeana	3rd grade	Homeless
Rosa	3rd Grade	Migrant
Louise	Elementary gifted resource	Highly mobile
Janice	Middle School English	Highly mobile
Tanya	High School English	Migrant
Ethan	High School Social Studies	At-risk

Jeana

Jeana teaches third grade at an elementary school in the mid-Eastern region of the United States. She has been teaching for six years.

Nature of Student Population
Jeana's school is located in a resort area and serves a diverse student population. "We have multi-million dollar homes and motels where families can live relatively inexpensively during the off season." Mobility increases as the tourist season ends in the late fall and the hotel rates drop and when the rates rise again in the spring. At mid year, during the off season, Jeana added three new students to her rolls in three weeks. Two of those students were currently residing in nearby motels and were likely to leave before the end of the school year. One student had left the class to move to a more affluent neighborhood and a new home. During the previous year, Jeana started with 20 students and ended with 26 without counting the students who arrived and left during the middle of the year. "It's a challenge when you don't even know they are leaving. When the students don't withdraw properly and we don't know why the children aren't coming, they stay on our rolls for 30 days. That affects our school's attendance rate, which is part of AYP."

Jeana estimated that at the time of the observation/interview about 26 percent of her students were at-risk of failing. She identified external factors, like absenteeism, especially for homeless and highly mobile students, as important in this risk. Jeana described a student who was out of school from November through January. His mother was reluctant to

share her address and the school had difficulty getting in touch. No where to go to do homework and lack of parental support were also challenges.

> Parents often have other priorities in extreme conditions. It's survival…Working parents may not be at home, maybe because they are working two jobs, and aren't able to check homework and reinforce skills. Sometimes the terminology we use are using is new to the parents, which also makes it hard for them to help.

In Jeana's school, there are a variety of supports for at-risk students. Jeana has students who receive special education services, Title I support, before-school help in the classroom, and a special after school program designed to serve highly mobile students. Title I and special education teachers spend part of the day in Jeana's class, using an inclusive "pull in" approach to provide instruction.

Training

Jeana's undergraduate degree was in education. She is currently working on her Master's degree. In terms of academic content that has helped inform her teaching of homeless and highly mobile students, Jeana noted that the work of Erik Erikson "made sense." Jeana also finds the cooperative learning techniques of Spencer Kagan useful in increasing student engagement and participation among her students. However, her own experiences as a child were the most influential. "I come from a middle class family, but I was close. I received free lunches, so I have understanding of what it's like to be that student…I was one of those underdogs in a Title I school with free/reduced lunch tickets."

Classroom Environment

Jeana's classroom is located in a school largely rebuilt in the past few years. The room was decorated with a variety of posters and student work. A number of the posters describe the steps for different cooperative learning activities. Student desks were arranged in pods of four, and there two small group tables on opposite sides of the room, allowing for multiple teachers to provide small group instruction at the same time. While students faced each other in their pods, one pod had the desks separated from each other and facing the front of the room. When asked about this, Jeana replied, "I had the two new girls [who just enrolled] in the same group. I didn't know them and it turns out they were very talkative, so I had to separate the desks. We switch every six weeks, so I'll have more information when I create the new seating chart."

Jeana uses a lot of cooperative learning activities with high student engagement. "There's less down time and fewer behavior problems." She also uses a token economy with raffle tickets that students receive as reinforcers that can be exchanged for prizes.

During the first two weeks, I give a whole lot of tickets that the students can use to buy candy, Slurpies, pencils, etc. I have high expectations and will take a ticket when those expectations aren't met, but the students can always earn them back. As the year goes by, I give out fewer tickets. The students don't need them to do what it is expected.

The Observation

The observation was conducted during the morning. There was a break while students attended physical education. No students were absent and there were 19 students in the class. The lessons included a review of animal habitats, a math lesson on multiplication facts, and a science vocabulary review. During the first science lesson and part of the math lesson, the Questioning Techniques Observation was conducted. The remainder of the math lesson and the second science lesson were included in the Differentiated Classroom Observation Protocol. The first science lesson included a whole group rapid fire questioning review of different habitats and students were asked to identify habitats and animals that would live in each. Students then participated in a "Mix, Pair, Share" activity to complete a habitat worksheet which was reviewed as a whole group, allowing students to "pop up" to answer questions. The math lesson reviewed the terms factors, products, square numbers, and patterns as a whole group. Students used a multiplication/division fact table to complete workbook pages independently. During independent work, some students worked with the Title I teacher to review math facts using a card game.

The second science lesson was intended as a review to prepare students for an upcoming vocabulary quiz. After a brief whole group review, students worked in pairs to quiz each other using the vocabulary words from their ecosystem unit, coaching each other, as needed. Students then worked independently to match vocabulary words and their definitions, gluing the pairs on to paper once checked by the teacher. Upon completion, students were allowed to quiz each other quietly. As a closing, students used their personal slate boards to respond to questions posed by the teacher.

Rosa

Rosa teaches third grade in an elementary school in sight of the Mexican border in the western United States. She is an experienced teacher who has been teaching for 17 years.

Nature of Student Population

Rosa had 18 students assigned to her class at the time of the interview. A large percentage of the children in the school are low income. In her class, specifically, a majority of the students could be classified as highly

mobile, migrant, or homeless. When Rosa was asked about at risk factors for the children in her classroom, she responded by explaining:

> Their background for some is at risk, some of them are very poor so they don't have some of the things we might take for granted like a home, or resources at home; for example, a place where they can do their homework or a person who can help them, somebody there at home.

Thus, her classroom has a mixture of children from low income backgrounds, with some children experiencing homelessness. She estimated that approximately 75-80 percent come from low income and/or migrant backgrounds.

Training
Rosa's teacher preparation program was from a traditional four-year university. Her teacher training included a bilingual program for instructional pedagogy and reading instruction. Additionally, she had an extensive (six month) student teaching experience with a master teacher who had been named a state teacher of the year. Rosa commented on the influence of working with this master teacher in her student teaching experience:

> … she actually influenced me into becoming a teacher in the first place …. The student teaching experience was really, really great and it dealt with these children [at risk children] also. … I knew what I was getting myself into…

Classroom Environment
Rosa's classroom was organized attractively and functionally. There were colorful and child-focused materials on the bulletin boards and throughout the room. The materials were related to various instructional goals on which the children were working. The desks were concentrated in the center of the room to allow students adequate space for working, but also to provide for maximum room for group activities and movement. The teacher's desk was traditionally located in the front of the classroom; however, Rosa spent virtually no time at her desk. Rather, she was constantly interacting with the students, leading them in a singing and movement activity related to an instructional unit, moving among the students as they worked, and talking with the whole group and individual students, alike.

When asked in the follow-up interview about her relationship with the students, Rosa responded, "We're very close. There's a very bonded relationship, in terms of sometimes it might even be too much, and I take on the role of the parent." Elaborating on her academic/socio-emotional

supportive approach to the children, she described her regular routine of staying after-school to work with the students:

> I stay after school with them, and we talk to each other and talk about other things. [*Interviewer: Not just school things?]* Not just school things because there are other issues in their lives that are affecting their school and it's, the boundaries are not as drawn out as may be in other schools because I need to be aware of what's going on with them, because it's so important The issues are so important, like I just told you that little boy, he's very much a risk factor. He came in very low, he's migrant, his father's just been deported, so he has all these things going on and I need to be there for him or else he'll just fall. I mean, no homework, he stays with me regularly after school.

Rosa is a bilingual (English/Spanish) speaker. In her classroom, however, she required the students to speak English, including one relatively new student who was a Spanish-only speaking student when he arrived. There were a few occasions during the observation when Rosa did speak in Spanish to individual students to make sure they understood instructional directions and assignments.

The children clearly respected Rosa and wanted to please her. Rather than refer to her as Mrs. X, they all called her "Teacher." When asked about this unusual, but simple, title later during the interview, Rosa responded that she considered being a teacher an honored position in her life and her community, and that being called "Teacher" by her students was one of the highest compliments they could pay her.

The Observation
Rosa's instructional time was very efficiently used with little lost time between activities. She used a creative approach for engaging students. For example, she used a dance to help the children understand math functions. The children clearly were having fun with the lesson on math (multiplication and division). Additionally, the classroom could be characterized as one filled with constant activities and high student engagement.

The initial portion of the observation focused on the Differentiated Classroom Observation Scale Protocol. The observation activity was whole group instruction related to reinforcing the math concept of long division. The students participated in a group sing-along and dance activity in which long division rules were reinforced. During the group activity, Rosa stopped periodically to call on students to answer questions or to correct a student's understanding.

The Questioning Techniques Observation was used during the second portion of the observation. As the observation progressed, Rosa changed the focus from mathematics to teaching main idea in storytelling. After explaining the lesson and answering questions, she had students work on a writing assignment at their desks while she circulated throughout the classroom. She would stop periodically to comment or guide students in their work (a type of informal assessment), and to answer their questions. The lesson was dominated by teacher-generated questions. Typical questions that Rosa asked during this language arts lesson were ones such as the following:

- Low cognitive question: Is this a way to conserve resources?
- Intermediate cognitive question: The main idea is about what?
- High cognitive question: How can you conserve water in your home?

Most of Rosa's instruction during the observation was teacher centered, although there was some individualized informal assessment included. Throughout these highly teacher-directed whole group activities, there was not a single instance noted of students being off-task. In fact, all of the students were intensely engaged in the learning experiences – from the most capable learners to one student who was relatively new to the class and was an early English language learner. The students not only were engaged, but also knew the precise learning objectives on which the class – and the students, individually – were focusing. In fact, from time to time Rosa mentioned the learning goals to the class and the students appeared to resonate to this approach. It was clear that the instructional goals and objectives were not just for the teacher; the students took ownership in them. When asked about this issue in the interview, Rosa responded, "What I think is really important is that they know that they're accountable for everything."

Louise

Louise teaches elementary grade level students identified as gifted in a pullout program. Her elementary school is located in the southern region of the United States. She is a veteran teacher who has been teaching for over thirty years.

Nature of Student Population
The students Louise teaches come from very diverse backgrounds. She has students whose parents are doctors and students whose parents did not complete high school. Some of her students have academic skills that surpass their parents' abilities. The school is in a rural community and has the reputation of being able to serve students with a wide variety of abilities. Louise explained that the parent who is a doctor chose their school because the family had a gifted child and a child with disabilities.

The school is sensitive to the needs of twice exceptional students and Louise teaches a number of students with disabilities who are also gifted. Several students have learning disabilities and others have emotional challenges.

> I would say at least a third of my children receive counseling services because what my school realizes now is that when children act out, many times it's because they are bright, not because they're bad. So now, I get referrals because the children are not on task because they're bored. In times past, that was not the case. It was only the bright children. So about half my children are the well-behaved "bow heads" and the other half are challenges.

This expanded identification of giftedness poses one of Louise's greatest challenges in working with parents and teachers:

> I probably have a third of my children who perform below grade level because a lot of my children are left-brained children – math smart, science smart – but they can't read a lick…So I do have a lot [of children at risk of failing] and one of my biggest battles that I fight with parents is, "Oh, you're not passing in the regular classroom; therefore, you cannot go to Discovery." So I meet with them and I say that your child feels success in my classroom. It's the only place your child feels success. Please don't take that away from them. And I fight the same battle with the teachers.

About 10-to-20 percent of Louise's students will move during the school year. "I usually lose maybe three children and I gain about five and I have about 45 children." The reason some students leave is related to the challenge noted above:

> I have had one child who came new to the school and new to my classroom at the first of school who's already left. The reason she left was because she one of those that I told you about – she's smarter than her parents... So the parents have decided she was not making all A's here and they said she was too smart; therefore, it must be the school's fault. So they're going to homeschool her.

Another student was placed in a regional program for students with more significant emotional disabilities. Still others may move due to homelessness and poverty. While there are no shelters in the community, a recent news article identified a community of people experiencing homelessness living in the woods and Louise has students living in motels, one in a neighboring town.

Training
Louise received her undergraduate degree in secondary music education. Due to lack of music opportunities, she began her career teaching remedial math in grades two through six. Louise went on to get her elementary certification and an extra endorsement in math. Then, she decided to pursue her master's degree in language arts. She has since become a National Board Certified teacher and has 15-16 credit hours past her masters, but does not intend to obtain another degree. "I desire to learn and I will take courses, but there is no degree in the end."

Louise identified a number of learning experiences that were most valuable in her professional development in working with at-risk and highly mobile students. First, National Board certification

> "gave me a network of people. .. I send out a mass email to my National Board buddies and they're all passionate about teaching and they give me all their good stuff... I can email and say, 'What would you do about this?' So it's their network as much as it is the process."

Second, is teaching graduate courses on-line in the evening. "All the books that they use are ASCD books; therefore, I have to read every book before I teach the course. So it has been a great staff development for me because it keeps me current." Third, Louise identified DBAE, discipline based arts education, which aligns with Louise's interest in integrated arts and academics and allows students to interact with content at higher cognitive levels. A fourth factor that Louise realizes has influenced her teaching is her original degree:

> That music degree has helped me meet the needs of individual students more than anything…the first thing you do is you take your children and you say, "What is your socio-economic status? Do we need to buy you an instrument or can you afford to buy your own?" That's the first thing you ask. And then you say, "OK, are you really good at pitches? If you're great at pitches, you need to play a trombone or something where you listen carefully. If you're not good at pitches you need to be a percussionist because you're good at rhythm." So you've got to look at every child's strengths and weaknesses to decide which instrument they play. And so you've got this whole orchestra in front of you – well, you cannot play a piece unless everyone knows their part; therefore, you use so much individual instruction, and you get these people busy and you work with these people. Being a band director – that was a novel idea to teachers 30 years ago in the classroom. So when I entered the classroom with this degree, this was all I knew. The first two or three years, when I was such a horrible teacher, I

was trying to teach like I had been taught. Then I thought, "You know, I can use my music here!" So this is how I became this teacher – from that music degree I got years ago. I really think that it helped me...I had these children who were nonreaders and they were in beginning band. And I said, "How can you be in the band and be a nonreader because you can read music? Therefore, there must be a way for me to teach you how to read. If you can read a note, you can read a word. We just haven't figured out how yet." So, I guess my music gives me this something that I fall back on.

Classroom Environment

Louise's classroom was full of decorations. Stars were painted on the walls and ceiling and printed on the curtains hanging on the window. A series of old doors, painted different colors with geometric designs were anchored together to form a divider. Motivational posters were placed on the doors. There was a homemade round stage with a skirt that students used to present to the class. Shelves were stocked with labeled supplies that the students were allowed to access, as needed, to complete assignments. The room contained three round tables with four-to-five student chairs. Whole group and individual work were conducted from this seating arrangement. Louise had the following reflection about her classroom environment:

> The first thing is that I try to make sure it's safe. And I know that's a cliché, but for real. I have locks on the rollers on my stage…I have a lot of things in here and I have to be very careful with them...If you want stuff in your classroom it has to be safe. I want it to be warm and inviting. And I like for my children, the first day of school, to walk in here and say, "Wow, I wonder what we're going to do this year." Because I value creativity so much, that I want them to know that when they walk in, it's OK to be different, it's OK to be creative. I just want it to be warm and inviting and stimulating. And I like them to say, "Why did you do that?" And I'll say, "Just because I liked it." Or one of the most fun things this year has been the doors and this stage. Because I teach creativity, they say, "Why did you do that?" and I don't want to hide it. I say, "I had it in my head. Have you ever had anything in your head?. .. an idea?" And they say, "Yes." I say, "You know how you feel when you want to do it so bad and you can't figure out how to do it?" I say, "I had this for a year and hunting down old doors, and finding someone who could make me a stage, hunting down someone and explaining this idea and doing it. I felt so good when it was finished." So every time we talk about having an idea, they say, "Like the doors." So I guess my classroom is a teaching tool, also.

The Observation

Louise works with her gifted students one full school day per week. Because she was planning to be absent that week, Louise pulled her fourth and fifth graders together on the day of the observation. There were 11 students present. The lessons were developed as part of a thematic unit studying World War II. The lessons integrated many academic subjects and the arts. Louise shared the integration matrix based on Garner's Multiple Intelligences that she uses to ensure her plans meet the variety of strengths and interests of her students. The Questioning Techniques Observation was used during the initial phase of the observation. Louise began with a picture from an old calendar from the 1940's she found at a yard sale. After a brief review and discussion, the students worked independently, writing their predictions/observations for the meaning of the objects in the picture. The students then took turns standing on the stage and reading those predictions. Louise then told a "detective story," explaining how she used many resources (Internet, books, and local experts) to piece together what the picture meant during the war. During the final discussion, students reflected on several moral questions related to war and their own lives: Do you ever negotiate with friends? What do you think matters? Is this worth the cost? One student asked, "Why did we have to bomb Germany?" Another commented, "I wouldn't want to be president – the hard choices are sad and heartbreaking."

The Differentiated Classroom Observation Protocol was used during a small group problem-solving activity. Students were reminded of the Danish rescue boats the helped people escape during the war, and then divided into three groups. Each group was given a sheet of newspaper. Their task was to use their "newspaper" boat to cross the "sea" (the width of the classroom) with all team members touching the paper with the same body part. If anyone lost contact, the team was "out" because someone drowned. If the paper ripped, the boat sunk, also eliminating the team. Students repeated the exercise three times, using a different strategy to cross each time. A second activity included during the differentiated classroom observation was the creation of "feeling bottles." Louise had observed that some students had explored the war on their own and had come across content and pictures that were disturbing to them. After consulting with a counselor at school, she developed this lesson to give students a chance to express their feelings about what they had learned. Students were given water bottles. A variety of art materials were provided. Students could select different materials to represent their feelings regarding what they had learned about World War II. They were to select one item at a time and write a sentence explaining their decision and the representation.

Janice

Janice teaches seventh grade Language Arts at a middle school in the mid-Eastern region of the United States. She is a veteran teacher who has been teaching for over 30 years.

Nature of Student Population

A majority of students at Janice's school are military dependents and, therefore, meet the definition of highly mobile due to the nature of their parents' vocation. Mobility occurs because parents are transferred or they are deployed overseas. Janice described the current year's mobility in this way:

> There will be a greater move come September because that's when we will have a deployment. That's when they will leave. At one time I would have said 20 percent are on a constant rotation in and out of school. With the fact that the military is trying to make tours longer, most of your units are here for a longer period of time, so now not more than 10%. The parents are mostly in Iraq, Afghanistan, and Korea and the division is getting ready to deploy again. They were deployed two years ago for a year and they are getting ready to go again and at that time there will be probably 95% of our student population will have at least one parent deployed.

When parents deploy, many students may leave the area to live with a family member or friend of the family. When the deployment is over the student may move back to the area.

High mobility is one factor that contributes to the achievement gap in learning.[126] Janice estimated that at the time of the observation/interview about 10 percent of her students were at-risk of failing. The factors that contribute to her students being at-risk of failure include lack of motivation and "falling through the cracks." She stated that some of her students do not qualify for special education services but require intervention in order to succeed. Unfortunately, sometimes that intervention is not available or the need for intervention is not seen. Janice concluded that most students who fail at the school where she teaches do so because "they are not working."

Training

Janice was trained in a traditional teacher preparation program at a four-year university. She learned the basics of teaching in her training but did not learn how to work with students who are highly mobile. She believes that her greatest preparation for teaching students who are highly mobile,

particularly military dependents, is her own experience as a military spouse. She stated that:

> …having been a military spouse and having gone through the changes with my own children and in my own life, having to find a new teaching job when I go from one place to the next - a lot of what I bring is my own personal experience.

Therefore, Janice felt that she could empathize with both the students and their parents and assist them in getting the help they needed or navigating the military system.

Classroom Environment

Janice's classroom was decorated with posters related to reading and writing. The classroom was divided into two main areas, one area for whole group instruction and another area for individual student work. In the area for whole group instruction, the students' desks were arranged in pods of three. In the individual student work area, students could utilize two sofas, a table, or bean bags to do their independent work. Janice explained that:

> When it's independent time, that's when they have the choice and this comes back to the learning styles. At one time I even had a lamp so that we could cut the lights on one side and have dimmer lights but because of lack of space I had to remove it. This came from the learning styles and reaching different modalities. And I tell them that when I work at home I work at the kitchen table in straight back chair where I can spread my things out. That's where I am comfortable. Some people lay on the floor in front of the TV but that's not for me. I do have the bean bags and I have the pillows and I have the couches and they can come over here and work at the table. If I'm not doing short stories then I can slide this (recordings and headsets for student listening) aside or the table is on wheels I can move the whole thing out and if they are drafting they can use computers. So, it's just basically set up to give them some choice in how they're going to learn and also to make it.

The Observation

The observation focused on two of Janice's five classes: one Language Arts class and one Reading class. In Language Arts the lesson focused on reading and analyzing open response questions. The lesson included direct instruction, class discussion, and individual student work. The students were using a four-column method to break an essay or open response question into discrete parts. The goals of the lesson were as follows:

1. To effectively use the four-column method to analyze open response questions, think through a plan, and write an outline for an answer.

2. To write using appropriate form and conventions to communicate ideas and information.
3. To make sense of the variety of materials students read with emphasis on informational reading.
4. To locate and apply information for a specific purpose.
5. To reflect and evaluate what is read.

During the Language Arts lesson, the Differentiated Classroom Observation Protocol was used to record the nature of instructional activities, student engagement, the level of cognitive demand of instructional activities, and the role of the teacher/student in making instructional decisions.

The reading lesson included an introduction to a story the students were beginning and independent reading of the story. The focus of the observation in the Reading class was to analyze the nature and number of questions asked during the class period. The goals of the lesson included:

1. To enrich reading by using active reading strategies to relate prior knowledge to literary work.
2. To read works in various genres.
3. To indentify current themes across works.

The lesson included whole group instruction and individual student work as students either read the story silently or listened to the story using headphones in the independent student work area.

Tanya

Tanya teaches eleventh and twelfth grade English at a junior/senior high school in the northwestern region of the United States. She is a veteran teacher who has been teaching for over 30 years.

Nature of Student Population

A significant portion of students at Tanya's school are children of migrant workers. The school experiences a 30% mobility rate during a given year. Tanya teaches an Advanced Placement English course and so the mobility she is experiencing this school year in is not as high as the mobility she has experienced in the past. The Advanced Placement courses do not typically have as high a mobility rate as regular courses as students must qualify for Advanced Placement courses which requires access to past academic records. Tanya described the mobility in this way:

> At the level at which I operate, the AP, we don't see as many students who move. Actually the district, our school has a 30% mobility rate. But with AP, you're not going to see that mobility rate reflected there because of the level at which the class operates. So, I've only had one new student come and four drop out but not to leave the district but to go to another classroom for a variety of

reasons. I have a couple of students whose folks are farm workers and their parents get time off in the winter months and they tend to leave during December and I do have a couple of them who do that. But again with the level of the class I do not see as much mobility, but last year I had a struggling learner's class and that reflected the mobility of the district. So that about 25 to 30 percent of students coming and going at any time.

The reasons for mobility are described in her own words. Some of her students are children of migrant workers. The parents migrate between Mexico and the northwestern region where the school is located, following the agricultural needs of the season. Some of the students at the school even work in the fields themselves, beginning work at 4:00 a.m. and then coming to school at 8:00 a.m. Tanya stated, "the fact that they even show up makes me want to stand up and salute them." The class is 100% minority, with most students being considered English Language Learners (ELL).

Training

Tanya was trained in a traditional teacher preparation program at a four-year university. She found her preparation lacking, particularly in working with children of poverty and ELL students. She credits various professional development activities that have helped her grow in this area. Tanya cites training and books that have opened her eyes to working with various student populations. First, Tanya credits training by Ruby Payne and understanding the culture of poverty. She explains that this training:

> … was helpful for me, it was a real ah-ha that I am middle-class person and I am not working with middle-class students and they have a completely different framework and their parents than I do. And if you noticed there are no white people in that class. They are all Hispanics except for one girl who is part Sioux. We also had the culture of Hispanic issue and the culture of poverty going on so that was very powerful for me – that particular training.

She also cites working with the Urban Academy and the influence of a documentary entitled *Looking for An Argument.* She explained that this particular activity helped her in thinking about how to approach teaching and learning for students who are minority and who are from impoverished homes.

Tanya also explains that books have been a particular influence in her own development as a teacher. One book she cites was *Reading Don't Fix No Chevys.* This book focuses on the importance of tapping into boys' interests for reading. She explained that "if I change my strategies and change my text, I get my boys involved."

Classroom Environment

Tanya's classroom was decorated with posters related to literature and writing. The students sat at long tables that were organized into a U-shape. Students sat on both sides of the tables facing one another while also being able to see everyone else in the room. Tanya explained that the set-up of the classroom is integrally related to instruction:

> the classroom arrangement is so that students look at each other and you can't hide. You can't hide in my classroom anywhere. You are visible all the time to the teacher. I see all those kids.

Tanya also described the classroom environment in terms of climate. She values a climate of trust and respect, a climate in which students are free to share ideas and disagree with one another. She does not view herself as the "sage on the stage." Tanya explained, "that's the environment that I want – that it's safe to explore ideas and it's safe to change your mind and so I think that's part of what we do there because we are supportive of the kids."

The Observation

The observation focused on two separate lessons in AP English. In the first lesson observed, Tanya began the lesson by focusing students on the goals of the day and by discussing the elements of a successful writer. The lesson included a brief whole group discussion, followed by a group activity, and class discussion. The group activity included reading essays and critiquing them according to expectations in writing an essay. During this lesson, the Differentiated Classroom Observation Protocol was used to record the nature of instructional activities, student engagement, the level of cognitive demand of instructional activities, and the role of the teacher/student in making instructional decisions.

The second lesson observed involved mostly small group discussions among students who were reading the same book. Books being read in the class included *Life of Pi*, *Hamlet*, and *Friday Night Lights*. Tanya began by giving the students a list of essay prompts from past Advanced Placement examinations. The students were then instructed to craft an outlined response to one of the questions based on what they had read. As students discussed, Tanya rotated from group to group to join the discussions. The instructional goals were the same as from the previous lesson. During this lesson, the Questioning Techniques Analysis was used to record all questions being asked during the lesson. Because the students were in small groups, the researcher followed the teacher and recorded all questions being asked by the teacher and by the students during the small group discussions in which the teacher was involved.

Ethan

Ethan teaches ninth grade World History in a high school located in the northeastern region of the United States. At the time of the observation/interview he had been teaching for six years.

Nature of Student Population

Ethan teaches on a ninth grade team that was formed specifically to work with students who were identified as being at-risk of failure at the end of the middle school years. Therefore, all of the students in Ethan's classes are considered at-risk. Ethan does experience mobility, but only students leaving. The team began the year with 90 students and at the time of the observation, about half way through the school year, the team had 60 students. Ethan provides the following reasons for the mobility:

> Some have left, some got involved with law enforcement. We've got a couple who won't be coming back this year or for a long time or until their term is done. We normally lose a couple to pregnancies or medical issues. We have lost one this year to a medical issue. We have lost a couple in military – they have moved.

The students in Ethan's classes are at-risk of dropping out of school and as indicated by the decrease in the number of students on the team, some students are lost. Ethan explained that students do not join the team because the team begins the year with team-building exercises and the building of a community. Also, students need to have been identified at the end of the middle school years. Therefore, students leave but they do not join the team during the school year.

Training

Ethan came to education after a career in the military. He values his experience in the military and believes that this experience prepared him to be a teacher and to work in difficult situations. Ethan draws a similarity between being a soldier and being a teacher:

> Twenty years in the military exposed me to just about anything that I could imagine. Teachers are a lot like soldiers. They throw you out there and say hey good luck. Get the impossible done in an improbable amount of time, and it's underfunded. So when I come into this environment, I don't really find it all that surprising. I say OK an open field on a sunny day I can teach something. That's the attitude that I come with and so that comes and articulates into the classroom.

The military helped him to understand that people come from different cultures and different backgrounds, which transferred into his work with students. Ethan also cites attending training sessions by Carol Ann Tomlinson, an expert in differentiation, and Robert Marzano, an expert in teaching and learning, as influencing his work as a teacher.

Classroom Environment
The classroom was arranged in a traditional manner, with the students desks arranged in a diagonal fashion, with two sections facing each other and both sections facing the front of the room. The classroom was decorated with posters about history and also with student work. One poster in particular was a student drawing of Lenin. He explained that

> I let a girl paint a picture of Lenin on the wall and she knew that I valued her participation and understanding and then she was more receptive to learning in a traditional way.

Therefore, the room reflects both the curriculum and the students.

Ethan also values the importance of the relationship in ensuring a positive classroom environment. He explained that building a positive classroom environment begins the first day and in an unconventional way:

> Within the first week on Team [sic] I take them high ropes training so we build trust right off the bat. I take them high ropes training. I used to be a repel master, and I'm extremely comfortable with heights and climbing. And I'll drag them up these pillars and they'll do an obstacle course 30 feet up in the air and that does wonders for classroom management because the teacher led the way. And all the Delta teachers are there with them. And what happens is we build this relationship right off the bat of trust. So that when I come in I don't have to deal with some of the things. I think that is the great icebreaker.

Trust is an important way of creating a classroom environment in which students share ideas and opinions.

The Observation
Ethan teaches four World History courses throughout the day. The same lesson was used for each of the classes on the day that Ethan was observed/interviewed. Therefore, the learning goals and instructional activities were the same for the observations. The lesson focused on introducing the concept of protest. Ethan began by introducing this concept through a PowerPoint presentation and involving students in the discussion through the use of questioning techniques. The goals of the lesson were for students to understand the concept of protest, with

particular focus on the relationship between protest and nations in conflict and the rise of nationalism. The Differentiated Classroom Observation Scale and the Questioning Techniques Analysis were used with different classes, but the same lesson.

Data Collection

Three instruments were used to collect data regarding teacher practices. In-classroom dimensions of the study included observing teaching practices related to instructional strategies, student engagement, cognitive levels of learning, and teacher versus student directed learning. The post-instructional and dispositional dimension included a semi-structured interview focusing on teacher beliefs and practices in working with at-risk/highly mobile students.

Table 3.2 *Study Instruments and Categories of Teacher Effectiveness*

Instrumentation	Dispositional Dimension	In-Class Dimension
Differentiated Classroom Observation Scale		X
Questioning technique analysis chart		X
Teacher interview	X	

Dispositional Instrument

Teacher Interviews

The questions for the semi-structured interview protocol are linked to the six categories of the qualities framework and the three types of needs of at-risk/highly mobile students provided in the literature review in Section 2, with several additional questions asking teachers to reflect further on their practice broadly defined[127] and their perspective on why their practice merited recognition with an award. This interview protocol is based on a concurrent study examining the practices and beliefs of teachers who have won national and international awards for their teaching.[128] (See Appendix A for interview protocol.) Questions specifically focused on teacher practices and beliefs in working with at-risk/highly mobile students. The interview questions were designed to elicit participants' reflections on their own practice, exploring subjective experience of the profession of teaching. Each interview lasted from 45-90 minutes, depending on the length of participant response.

The interviews were scheduled on the same day as the two-hour observation (reported on in other sections of this report) to accommodate school and teacher schedules. The interviews were conducted by the observers, after the observation of teaching. All interviews were audio taped and transcribed verbatim allowing for additional analysis.

In-Classroom Observation Instruments

Two instruments were used for each observation. Observations involved two learning segments, each approximately one hour in length for a total of a two-hour observation. The in-class observation instruments can be found in Appendix B.

Differentiated Classroom Observation Scale

The observation instrument was the Differentiated Classroom Observation Scale[129], which involves recording several data points at 5-minute intervals: instructional strategies employed, percentage of students engaged, direction of the activity (e.g., primarily teacher-directed or primarily student-directed), and levels of cognitive demand. On this scale, observers record any instructional strategies employed within a 5-minute interval, using a set of codes provided with the scale (e.g., lecture, teacher questioning, student response, independent seat work, group discussion, assessment activity, etc.). The observer also assesses and notes all levels of cognitive demand presented within the interval, using six levels (knowledge, comprehension, application, analysis, evaluation, creation). For the other two data points, only one data point per interval is recorded; director of learning is recorded as a general observation across the interval, while student engagement is recorded based on noting percentage of students engaged at a predetermined time point within the interval. Data on these lesson features are recorded for the whole class together or for multiple groups if differentiated groups are identified in advance. The instrument was developed by researchers at Ball State University as a way to examine instructional practices related to differentiation and high ability learners. However, the researchers note that the instrument is also valuable for examining instructional practices with any group of students.[130]

Questioning Techniques Analysis Chart

This instrument was intended for use in categorizing the types of questions asked by the teacher and by the students. The observer recorded all instructional questions asked by the teacher, orally and in writing, for one hour during the language arts lesson using regular notebook paper. They were also asked to record student-generated questions that were not procedural in nature but related to the instructional content. Questions

were categorized based on low, intermediate, and high cognitive demand.[131] Later the observer wrote in three examples of each question type on the *Questioning Techniques Analysis Chart* and tallied the number of questions asked by teachers and students at each level. Percentages were calculated for total questions asked at each level. A Guide for Categorizing Questions based on Bloom's taxonomy[132] was provided as a reference for observers to ensure consistency in coding.

Data Analysis Procedures

The data were analyzed using both quantitative and qualitative approaches. The data gleaned from the in-class observations were analyzed using quantitative methods and the interview data were analyzed using both quantitative and qualitative methods. An overview of the instruments along with the data analysis is provided in Table 3.3.

Interview Data

The data from the interview were analyzed in two ways. First, the researchers used codes to categorize the interview data along two dimensions. These dimensions included the qualities that make an effective teacher and the three categories of needs of at-risk/highly mobile students. Please see Appendix C for the codes used in the analysis. The interview data were then analyzed according to the proportions of words in the data pertaining to each category, yielding proportions for each of the subheadings under the two main dimensions and for the intersections of the two dimensions, resulting in 28 cells. The data were then analyzed qualitatively for emerging themes that would not have been apparent using the quantitative analysis. In cases where the researchers coded the same phrases differently, the researchers discussed the phrases and the codes until a consensus was reached.

In-Class Observation Data

The data from the in-class observation instruments were analyzed using descriptive statistics. The purpose of the study was to describe what effective teachers of at-risk and highly mobile students do in the classroom that makes them effective.

Table 3.3. *Description of Analyses Conducted by Instrument*

Instrument	Purpose	Analyses
Questioning Techniques Analysis	Level of Questions Asked	Descriptive Statistics

Chart	Teacher vs. Student Initiated Questions Number of Questions Asked	
Differentiated Observation Scale	Number and Nature of Instructional Activities Cognitive Level of Instructional Activities Student Engagement Teacher vs. Student Director of Learning	Descriptive Statistics
Interview	Teacher Beliefs and Practices	Content Analysis

SECTION 4
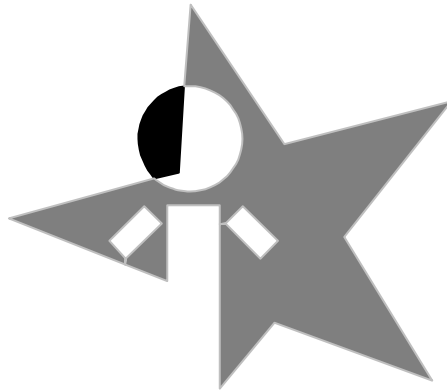
RESULTS

Pre-dispositional Interview Data

Quantitative Analysis

The research team developed a coding template for interpreting the six teacher interviews. Each researcher coded all interviews and then we reviewed our individual codings collectively in order to achieve consensus when differences occurred. Often, additional context provided by the observer informed these discussions. The coded transcriptions were used to calculate the number and proportion of words assigned to each cell in the matrix that reflect the multiple dimensions addressed in this study. These dimensions were used to form a matrix that included the qualities identified in the extant research that make an effective teacher and the three categories of needs of at-risk/highly mobile students. Please see Appendix C for the codes used in the analysis. Table 4.1 provides the actual word count for each of the subheadings under the two main dimensions and for the intersections of the two dimensions. Table 4.2 provides the proportion of words per cell related to the total words transcribed. Each of the coded areas is explored in the literature review found in Section 2.

Table 4.1. *Number of Words Coded in Each Category*

Effective Teacher Qualities/Needs of At-risk/Highly Mobile Students	Academic Needs (AC)	Affective Needs (AF)	Technical Needs (T)	Other (O)	Total Words by Teacher Quality
Background (B)	817	153	87	535	1,592
Teacher as a Person (P)	1,977	4,450	2,085	1,053	9,565
Classroom Management and Organization (CMO)	2,040	2,338	567	0	4,945
Planning and Organizing for Instruction (PO)	2,989	398	1,365	0	4,752
Instructional Delivery (ID)	6,164	1,521	97	0	7,782
Monitoring Student Progress and Potential (MP)	3,183	1,732	663	0	5,578
Other (O)	334	0	757	0	1,091
Total Words by Student Needs	17,504	10,592	5,621	1,588	35,305

Table 4.2. *Percentage of Words Coded in Each Category*

	Academic Needs (AC)	Affective Needs (AF)	Technical Needs (T)	Other (O)	Total Percentage of Words by Quality
Background (B)	2.3%	0.4%	0.2%	1.5%	4.5%
Teacher as a Person (P)	5.6%	12.6%	5.9%	3.0%	27.1%
Classroom Management and Organization (CMO)	5.8%	6.6%	1.6%	0.0%	14.0%
Planning and Organizing for Instruction (PO)	8.5%	1.1%	3.9%	0.0%	13.5%
Instructional Delivery (ID)	17.5%	4.3%	0.3%	0.0%	22.0%
Monitoring Student Progress and Potential (MP)	9.0%	4.9%	1.9%	0.0%	15.8%
Other (O)	0.9%	0.0%	2.1%	0.0%	3.1%
Total Percentage of Words by Need	49.6%	30.0%	15.9%	4.5%	

Looking at student needs categories, nearly half of the teacher's responses focused on the academic needs of students while 30 percent addressed their students' affective needs and almost 16 percent related to the teachers' efforts to meet needs that were outside the classroom. Figure 4.1 shows the relative percentages of comments by student need. The most frequently coded teacher qualities were related to the teacher as a person and instructional delivery, which combined, accounted for approximately 50 percent of the responses. Qualities and skills that feed into instructional delivery, monitoring progress, management, and planning, accounted for 41 percent of the teachers' words. Figure 4.2 shows the relative percentages of comments by teacher quality.

Figure 4.1. *Percentage of Comments, by Student Need*
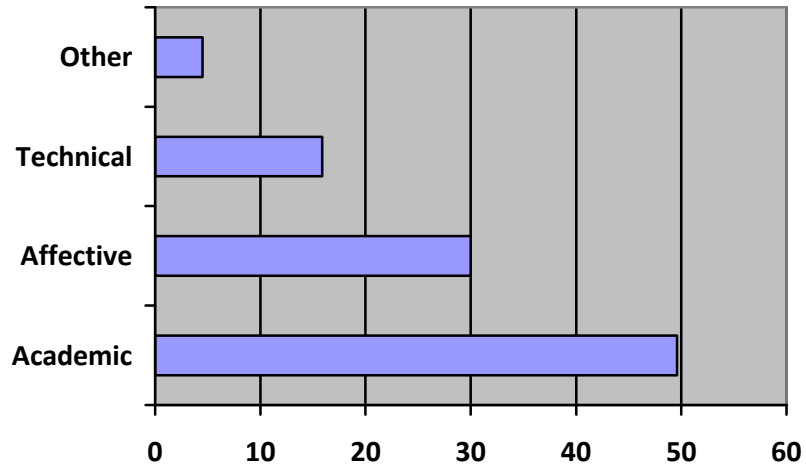
Figure 4.2. *Percentage of Comments, by Effective Teacher Quality*
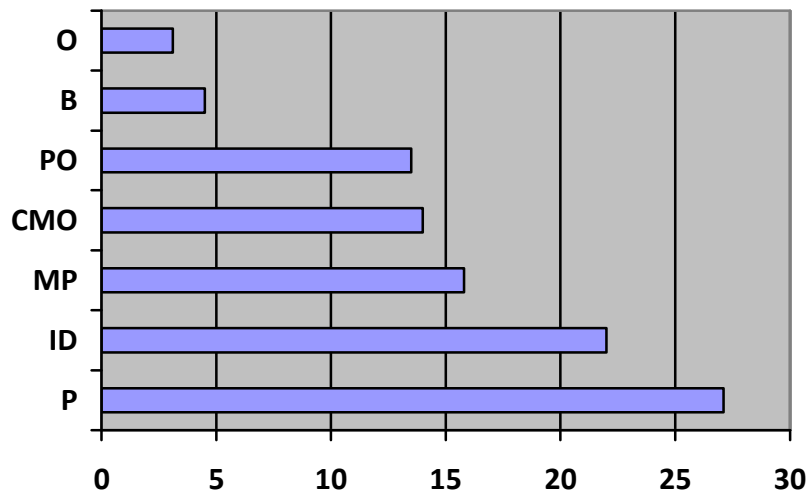
When the intersection of the two main dimensions is reviewed, some proportions seem intuitive. For example, it is reasonable to expect that instructional delivery will coincide most frequently with academic needs and that the "teacher as a person" category will align most closely with the affective needs of students. However, there are intersections that appear to shed light on the special strengths these teachers demonstrated in reaching at-risk and highly mobile students. Specifically, the academic and technical needs of students combined were responsible for nearly half of the "teacher as a person" codings. These six teachers reflected upon affective and academic needs in similar proportions when describing elements of classroom management, and included technical needs in their

planning process. Monitoring of student progress included students' affective as well as academic needs with nearly a third of monitoring coding.

Another key finding of this analysis is that many of the teachers' responses integrated dimensions across needs and teacher qualities, making it difficult to separate affective and academic comments. The teachers tended to look at their students and their teaching holistically. While meeting academic needs was their primary concern, they recognized that this could not occur without dealing with their students' emotional needs. Nearly half of the comments were coded under academic needs while affective needs constituted thirty percent of the comments. Additional interesting findings included the following:

- Components of instruction were closely woven together.
- Monitoring was an ongoing process that informed immediate instruction and future planning.
- Classroom management was seen as a vehicle to ensure academic success.

Table 4.3 provides samples of the teachers' words that were coded within these cells. The coding keys can be found in Appendix C. They are listed from the greatest to least in terms of percentage of words in responses. Cells with less than three percent are not included.

Table 4.3. *Sample of Teacher Words Within the Coded Categories*

Cell Coding	Percentage of Words	Samples of Teachers' Words
ACID	17.5%	I try to do a lot of high student engagement; I get the students up and around. I model new skills, using the overhead and examples and then have the students complete independent practice. I use a lot of cooperative learning to increase on task behavior. I incorporate games, cheering, and chanting. Active learning will increase their learning. (Jeana)
AFP	12.6%	I have kids in that class, the fact that they even show up makes me want to stand up and salute them much less that they do any work. The fact that they come at all is huge because of their home environments. When you get to know them as people and you value them they know that you know that they are there or not. That gets them there. And then slowly as the year progresses they begin to perform. Because I don't believe that they are lazy and I don't believe that they are unmotivated. So that's the language and their emotional needs. (Rosa)
ACMP	9.0%	When they come in January we try to sit down with them and explain what we're doing and try to catch them up as quickly as we can. I find out what they know and what they don't know and give them a syllabus. But I've thrown syllabi out recently because we've gone to a new style. We test the waters

		everyday. (Tanya)
ACPO	8.5%	I develop lesson plans every single time, practically, oh gosh, it's like, my husband says "ok, you should have this down pat, why are you" but it's not, everything is changing constantly. And the kids are different, and sometimes I have to do three division lessons and sometimes I have to do one and it depends on the students. (Rosa)
AFCMO	6.6%	And I'll drag them up these pillars and they'll do an obstacle course 30 feet up in the air and that does wonders for classroom management because the teacher led the way. And all the Delta teachers are there with them. And what happens is we build this relationship right off the bat of trust. So that when I come in I don't have to deal with some of the things. I think that is the great icebreaker. (Ethan)
TP	5.9%	And one of the best places I go to interact with parents is yard sales. I do like yard sales, but it makes me real to them and it makes them real to me. When I go see where some of these children live, - you know some of the kids will say, "We're having a yard sale Saturday." I'll say, "I'll try to make it." When I go there, it puts me on a different place with the parents and we chat and I always buy something. And then I believe they think I value them. (Louise)
ACCMO	5.8%	It's very interactive. You see, I use pocket charts, they know exactly how to use them, during reading we do groups, and they rotate through the stations. (Rosa)
ACP	5.6%	I think it's a big role because I take ownership into their learning process and involvement and there should be no question on their part that I'm a player and that they don't stand alone. And I think that makes a big difference. (Janice)
AFMP	4.9%	And the first thing that I do in the morning is sit down with my children and I think that's the most important thing that I do everyday. The most. Most teachers think it's a waste of time, but if they're not ready to learn, there's no point in me being here. (Louise)
AFID	4.3%	I do a lot of tutoring after school because I understand some of these kids aren't going to get it. Some are really shy. The shy people come in and they talk to me. We bring them in and sit down and address more specifically their issues. So a lot of tutoring after school. (Tanya)
TPO	3.9%	When families come in after the start of the year, I make parent contact since they missed Open House. I keep extra packets of materials to share with them. (Jeana)
OP	3.0%	And I am passionately committed to getting our students ready for whatever the future is going to throw at them and we can't predict what that is going to be so I guess I feel that what I do is very critical. (Tanya)

Qualitative Analysis

Affective and Academic Intertwined

As noted above, the interviews were striking for the close link between academic and affective needs. It was often difficult to separate the two as our teachers recognized the importance of seeing their students as individuals with a wide array of needs. Although students academic success was a primary desired outcome, our teachers' stories highlight the idea that academic success required a relationship with their students. "What motivates the students to stay in that class is the personal connection to the teacher and I make it a point to learn my students as learners. I do not teach English, I teach students." (Tanya). These teachers taught children and youth *not* just subjects. "Teaching is a whole lot more than knowing my content and being able to give that information…That really is just about 10 percent of what a teacher really does," (Louise). They found ways to learn about student interests and incorporated those interests into academic content to make it meaningful.

> I try to go in the directions that they want to go. And I try to remember that my job is not to teach the subjects but to make them contributing citizens to society. I like to build on their strengths. So, if you remember that your job is to make good citizens out of people, it drives your instruction in a different direction. (Louise)

Assessment as Integral to Meeting Student Needs

At the same time, these teachers did not take foundational academic skills for granted. They were continually assessing their students and modifying instruction to fill any identified gaps. "I'm constantly assessing – they don't even know who I'm watching," (Jeana). "I constantly ask for feedback from them," (Tanya). Assessment was not a separate task but the fuel for planning. Assessment went beyond the notion of a pretest or posttest. It incorporated ongoing, formative evaluation based on keen observations and looked beyond academics to understand the emotional and technical needs of their students.

Meeting Basic Needs of Students

Furthermore, our teachers knew their students well enough to identify basic needs that were not being met and they were prepared to address those needs in the classroom and through other school and community resources. "They need book bags, pencils, basic materials. We have these at school for them…If they're hungry, I have oatmeal in the class that we can heat up in the microwave," (Jeana).

High Expectations

While seeing students holistically, our teachers did not allow the challenges their students faced to become excuses for poor performance. There were no excuses for the students or the teachers. "Failure of a child is a reflection on you and your teaching methods, not on the child," (Louise). These teachers had high expectations for all their students and for themselves. "If they don't get into [English] 101, I take that personally. That I failed that child in some way. And I want to know why and I snag them when I see them next and ask what could I have done better?" (Tanya)

They changed their instruction to reach the students before them. It was a given that instruction needed to change based on student needs.

> I just do not believe in can't and won't. I don't believe my kids are lazy and unmotivated. The problem is the strategies in the text that I'm using. So, if I change my strategies and change my text, I get my boys involved…I have a pet peeve with hearing teachers say that these kids can't learn or won't learn. That puts the hair on the back of my neck [on end]. (Tanya)

Because they worked so diligently to reach their students, these teachers felt justified in demanding the best from their students. The teachers let their students know that they were "there" for them and would make the extra effort when needed. If the student couldn't do something, the teacher would walk along side until the student could.

> And I said, "Friday, come in after school and we will sit down and I will show you how to get started" and for two hours that kid sat next to me. I sat at the computer and I asked questions. I typed up his responses in outline form and did half of the essay. I handed it to him and said, "Do you understand it now?" and he said he did. And that child has not missed an essay since. It's not lazy, it's not unmotivated. (Tanya)

Measuring Success

Not only did the holistic view of students affect the way teachers provided instruction, it affected the teachers' way of measuring success. Success went beyond passing a test and was often perceived in a futuristic manner. They looked at how their students succeeded in the next grade, in college, and how they became caring, productive adults.

> I measure other things and I'm not a teacher for their achievement tests. I don't hate them. I teach my children test taking techniques, because it's part of their lives. But that does not drive my instruction at all. I have to keep up with – I told you before – what

my children are interested in. I can take that and go through that
avenue to get where I want to go. (Louise)

In-Class Observation Results

Differentiated Classroom Observation Scale

The Differentiated Classroom Observation Scale (DCOS) yielded data
regarding the nature and number of instructional activities, student
engagement, and teacher-directed versus student-directed learning. Table
4.4 shows the results from the DCOS.

For instructional activities, the researchers recorded all instructional
activities in five-minute segments using codes established by the DCOS.
According to the data, the six teachers engaged in 8.5 instructional
activities per observation. However, the standard deviation(SD=3.02)
indicates a wide variability among the six teachers in numbers of
instructional activities per observation segment.

To record student engagement, researchers scanned the room at four
minutes and thirty seconds into each five-minute segment and recorded
whether engagement was low (1), medium (2), or high (3). Across the six
teachers' observations, student engagement was relatively high and the
standard deviation (SD=.18) indicates little variability among teachers. In
other words, student engagement was high across all six teachers.

Researchers on the team then noted the director of the learning, based on a
continuum of (1) to (5). A (1) indicates that the teacher directs all learning
and a (5) indicates that students direct all the learning. Numbers between
1 and 5 indicate shared direction of learning. According to the
observation data, teachers primarily directed the learning, with an average
of 1.63. The standard deviation (SD=.93) indicates slight variability
across the six teachers, with some student direction of learning present.

Table 4.4. *Analysis of DCOS data*

	Mean	Standard Deviations
Instructional Activities	8.5	3.02
Student Engagement	2.78	.18
Teacher vs. Student Director of Learning	1.63	.93

Researchers also noted the cognitive levels of instructional activities during each observation segment. Specifically, during each five-minute observation segment researchers noted whether each cognitive level of the revised Bloom's Taxonomy was (1) not evident, (2) evident, or (3) well-represented. Table 4.5 shows the mean representation of each cognitive level across observations. Knowledge and Comprehension both were between evident and well-represented as well as application and analysis. Evaluation and create cognitive levels were between not evident and evident, indicating that in some instances students were engaged at the higher levels of thinking.

Table 4.5. *Cognitive Levels of Instructional Activities*

Cognitive Level	Mean Representation	Standard Deviation
Knowledge	2.38	.44
Comprehension	2.16	.42
Application	2.00	.73
Analysis	2.09	.73
Evaluation	1.38	.50
Create	1.36	.22

Questioning Techniques Analysis

The data on questioning techniques were gathered from direct classroom observations as described previously. The observers noted questions asked by the teacher and the students. The questions were recorded according to three question levels. Questions were coded as to whether they were low, intermediate, or high cognitive demand questions. Two additional variables, Student Questions and Teacher Questions, were calculated as the total number of questions per observation period. Table 4.6 presents the descriptive data for this analysis.

Table 4.6 *Analysis of Teacher and Student Generated Questions, Numbers and Percentages*

	Low Cognitive Questions	*Medium Cognitive Questions*	*High Cognitive Questions*	*Total Questions*
Teacher Questions	77	71	55	203
	38%	35%	27%	80%
Student Questions	13	28	9	50
	26%	56%	18%	20%
Totals by Cognitive Level	90	99	64	253
	36%	39%	25%	100%

Teachers generated the majority of questions, a total of 203 across the six teachers. Students also generated questionings, a total of 50 across the six teachers. Table 4.6 indicates that teachers asked questions on a range of cognitive levels. The number of questions asked at the low cognitive level was about the same as the number of questions asked at the medium cognitive level, with percentages of total questions at 36% and 39%, respectively. It is interesting to note that 27% of the questions asked were at a high cognitive level. As for students, the majority of questions asked were at the medium cognitive level, indicating that questions were more than merely knowledge-based.

A second analysis of the mean number of questions generated by teachers and students per teacher observed indicated in Table 4.7 that the mean number of questions generated by teachers was 38.83 and 8.33 by students. Table 4.7 also provides further indication of the variability in use of questioning as indicated by the relatively large standard deviations for teacher-generated questions and student-generated questions.

Table 4.7 *Means and Standard Deviations of Questions Asked*

Source of Questions	Means: Total Number of Questions	Standard Deviations: Total Number of Questions
Teacher-generated	38.83	10.83
Student-generated	8.33	9.16

In Section 5, the findings are discussed in greater detail and conclusions and recommendations are offered to summarize what can be learned from the study.

SECTION 5

DISCUSSION OF FINDINGS
AND RECOMMENDATIONS

This study examined the beliefs and practices of teachers who have won national and/or state teaching awards while working with at-risk/highly mobile students. In Phase I, the study examined the literature related to effective practices in working with at-risk/highly mobile students. The literature was examined in terms of the needs of these populations, including academic needs, affective needs, and technical needs. The resulting literature review can be found in Section 2 of this report. In Phase II, teacher participants were identified. In order to participate, teachers must have won a national and/or state award and must be working at a school with significant populations of students who exhibited at-risk factors, such as poverty or homelessness, or were highly mobile. The final and key phase of the study involved case studies of six teachers identified in Phase II. In Phase III, each teacher was observed for approximately two hours and interviewed regarding their beliefs and practices about working with at-risk/highly mobile students and in general.

Limitations to the Study

Difficulties were encountered on multiple levels in obtaining the necessary data for this study. In Phase I, the researchers examined the extant literature related to working with at-risk/highly mobile students. While the literature and empirical studies were plentiful related to at-risk students, the literature and empirical studies related to working with highly mobile students were sparse, thus, indicating a need for this study. Challenges also were encountered in identifying national and/or state award-winning teachers who work with at-risk/highly mobile students. While the number of teachers winning these awards was plentiful, the number who won awards specifically for working with these special populations was not necessarily indicated in the descriptions of the award winners. Once the teachers were identified, however, they were eager to participate. Therefore, Phase III was less challenging than might have been expected, other than scheduling observation times between the researchers and the teachers.

In addition to the challenges described above, the study faced additional limitations. Our observations of the teachers teaching involved one two-hour observation period. While these observations provided valuable information regarding teaching practices, it provided a limited picture due to the single observation. However, observing each teacher more than once was cost prohibitive.

Our results provide some interesting findings about effective teachers' beliefs and practices in working with at-risk/highly mobile students but definitive conclusions about working with these populations and the

nature of effective teaching should not be drawn from a single study such as this due to the nature of case study research. Rather, we hope that this report will generate research questions and methods that can be replicated with larger samples.

Pre-Dispositional Interview Data

A semi-structured interview protocol (Appendix A) was used to glean information regarding the teaching practices and beliefs in working with at-risk and/or highly mobile students. Teachers were interviewed on the same day as the observation. The interviews lasted between 45 minutes and 90 minutes, depending upon the length of participant responses. The interviews were recorded and transcribed verbatim. The researchers coded the transcribed interviews along two dimensions: 1) the qualities that make an effective teacher and 2) the needs of students who are at-risk and/or highly mobile. The codes can be found in Appendix C. The researchers also examined the interview data for emergent themes.

Summary of Findings

The interview data were coded according to established categories. Percentages were calculated by dividing the number of words in each category by the total number of words spoken by the interviewees. The interview data were then examined for themes that emerged from the content analysis.

The data were coded according to the three categories of needs of at-risk/highly mobile students. First, *academic needs* included interview data focusing on the academic achievement and progress of students. *Affective needs* included helping students develop a sense of belonging, developing intrinsic motivation and attending to emotional needs. Finally, *technical needs* involved focusing on the outside needs of at-risk/highly mobile students such as assistance with food, housing, referrals to agencies. Of the three categories of needs, teacher comments on academic needs (49.6%) comprised a plurality of the interview data, with affective needs (30%) also being a focal point of teacher comments. Approximately 16% of teacher comments focused on meeting the technical needs of their students.

The data were also coded according to the six qualities that make an effective teacher.[133] The majority of the interview data were coded under *teacher as a person* (27.1%) and *instructional delivery* (22%). These percentages are not surprising, considering that teachers, by nature of the profession of teaching, focus on the affective and academic needs of their

students. *Classroom management and organization* (14%), *planning* (13.5%), and *monitoring student progress and potential* (15.8%) also were well-represented in teacher comments.

Emergent themes were evident after the six interviews were coded. Specifically, the teachers viewed academic and affective needs as intertwined and the researchers had difficulty in placing comments in one category. Secondly, the teachers used assessment as a means to understand student academic needs and to plan instruction. Thirdly, the teachers understood that, for many of their students, basic physical needs were not being met and they made efforts to meet those basic needs in the classroom. Fourthly, the needs of the students did not impact the expectations of the teachers. In other words, the teachers held high expectations of their students and worked to help each student achieve success regardless of their personal academic and social backgrounds. Additionally, these award-winning teachers viewed the students' success as their own success. If students were not successful, then the teachers were not either.

Discussion of Interview Findings

Since the interview protocol was shaped to reflect the six categories of the qualities of effective teachers and the three types of needs (affective, academic, and technical) of at-risk/highly mobile students identified in the literature review, the protocol influenced the incidence of words calculated within each cell of the analysis. However, despite a question that seemingly aligned with a single category or need, the teachers' responses were far more complex. Additionally, the responses highly integrated the various needs and teacher qualities. These teachers did not see their work occurring in silos.

Teacher as a Person: Caring for Students
Their caring and positive relationships with students permeated their teaching. Twenty-seven percent of the comments made by teachers during the interview focused on the teachers' relationships with students Planning, assessment, instruction, and classroom management were not separate activities. All were needed to be successful, but often occurred in unison. Relationships provided the teachers with a broad understanding of their students which affected long and short term planning, which was also influenced by multiple types of assessments ranging from analysis of formalized tests, to day-to-day observations, to confronting students and asking them what led to breakdown in understanding. A similar case study found that effective teachers of students who face poverty view their relationships with students as paramount to the success of the students. [134] Another study of four schools serving high proportions of migrant students found that when the staff developed relationships with the students and

their families, they were able to empathize with the challenges these students face. [135] Furthermore, the frequent mention of relationships with students is consistent with the findings of a small study of programs to support the literacy skills of homeless and highly mobile students.[136]

Positive Classroom Learning Environment
Classroom management grew out of knowing their students and providing effective instruction. This ability to juggle multiple responsibilities concurrently could be explained as an expanded version of "withitness"[137] that is used to describe effective classroom management. Not only do these teachers keep things flowing smoothly in their classrooms, but also that smooth, interconnected flow can be seen throughout the teaching process. Mihály Csíkszentmihályi's concept of "flow,"[138] "the mental state of operation in which the person is fully immersed in what he or she is doing, characterized by a feeling of energized focus, full involvement, and success in the process of the activity," was evident in the work of these teachers. Numerous studies support the finding that effective teachers of at-risk and/or highly mobile students provide a positive classroom environment, with high expectations of their students.[139] An emphasis on positive classroom environments was a finding in this study.

Teacher Sense of Self-effacacy
Our teachers' responses to the interview questions reflected a high level of teacher self efficacy,[140] the belief that teaching changes the lives of students and that the teacher has the skills needed to make such a difference. Based on the concept of self-efficacy proposed by Albert Bandura and others, high teacher self efficacy describes teachers who perceive themselves as capable, active agents in their students' lives. Our teachers were passionate about their students and about their work. They believed in both. Teachers with high self efficacy do not blame their students for failures; they look at themselves and challenge their own teaching to better reach those students in the future. Teachers with high self efficacy do not give up. When asked to make recommendations to other teachers of at risk and highly mobile students, this message was clear:

> "The students are depending on you to learn. You set the tone." (Jeana)

> "I take ownership into their learning process and involvement and there should be no question on their part that I'm a player and that they don't stand alone." (Janice)

> "You really have to be dedicated…if you are going to work with at-risk kids. Your heart has to be in it or else you won't make it." (Rosa)

"Make sure it's your passion. Don't do it if it's not. Because if it's not, you'll waste your time and kids' time." (Ethan)

- Never take anything for granted.
- They need everything provided for them.
- Their parents love them and want them to succeed, they just don't know how. We have 19 new teachers on our staff this year and I've heard that so many times. "Their parents just don't care." And I say, "Yes, they do." "But they didn't send them to school prepared." I say, "They don't have it at home." They'll say, "It's just a pencil." "I'll bet there are no pencils at their house. They probably packed up everything in a car last week and moved to that house. They left the pencils." The parents they think don't care were usually failures in school and don't want to come to school.
- Never forget why you want to teach.
- Failure of a child is a reflection on you and your teaching methods, not on the child. (Louise)

"It has to be a calling. It has to be your mission in life if you're going to survive in a school like this one. Some of us not only survive, we thrive in this environment. Because every day I go to work, I think this is the day I can make a difference in a kid's life. What could be more awesome than that!" (Tanya)

In similar studies, researchers found that teachers of students who face incredible odds believe that they can make a difference. [141] In fact, one study found a stronger relationship between teacher self-efficacy and lower-achieving students than with higher-achieving students. These teachers exhibit the quality that they impact their students' futures, for better or for worse.

In-Class Observation Data

Six teachers were observed using two observation instruments, the Differentiated Classroom Observation Scale and the Questioning Techniques Analysis. The two instruments were used for approximately one hour each for a total of a two hour observation.

More specifically, the following instructional practices and conditions were recorded:
a. Type and number of instructional activities;
b. Cognitive level of instructional activities;
c. Student engagement;

d. Teacher-directed versus student directed learning; and,

e. Number and cognitive levels of questions asked by both teachers and students.

Summary of Findings

The teachers in the case studies used a wide variety of instructional activities. They also used, on average, 8.5 instructional activities per observation which means that students were engaged with different activities at different times during instruction. The instructional activities also represented a range of cognitive levels, with knowledge and comprehension as being most represented, and with higher cognitive levels of application and analysis as being the second most represented. Evaluation and synthesis levels of thinking were least represented, but present in some observations.

The range of cognitive levels was also reflected in the questions asked by teachers. Low cognitive levels of questions represented 38 percent of the total questions asked while 35 percent of the questions asked by teachers were at intermediate levels of thinking. High cognitive levels of questions were also asked by teachers, with 27 percent of total number of questions. The teachers asked a vast majority of questions (as opposed to students asking the questions) with the average number of questions asked per observation being 38.3.

Student engagement was high across the six teachers, with an average engagement score 2.83 on a scale from 1 to 3. Teachers directed most of the learning during the observations with a mean of 1.63 on a scale of (1) teacher directs all learning to (5) student directs all learning.

Discussion of In-Class Observation Findings

Type, Number, and Cognitive Levels of Instructional Activities

The teachers in this study used a high number of instructional activities during instruction. Similar results in studies that examine student and teacher views of effective teaching and empirical studies of effective teaching are consistent with the finding of this study. Teachers who work with at-risk students and at-risk students, themselves, value a variety of instructional activities. Additionally, teachers view an effective teacher as one who uses a variety of instructional techniques.[142] Students at-risk of failure also cite the ability to teach in a multitude of ways to reach students as characteristic of a good teacher. [143] Also, perceptions of good teaching are also supported by empirical research. Numerous studies find that the most effective teachers who work with students facing possible failure use

a variety of instructional activities to meet student needs.[144]   Table 5.1
offers a further analysis of the instructional activities, along with the
number of teachers who used those activities, during the observation
period.

Table 5.1. *Type of Instructional Activities*

Instructional Activity	Number of Teachers
Lecture	3
Lecture with Discussion	3
Class Discussion	1
Small Group Discussion	1
Problem Modeling	5
Student Presentation	2
Demonstration	2
Questioning by Teacher	6
Student Responding	6
Manipulatives	2
Anchoring Activity Before Lesson	1
Seat-work individual	3
Seat-work group	2
Cooperative Learning	1
Teacher interacting with individual student	5
Teacher interacting with group	3
Technology Use by Teacher	2

N= 6

Seventeen different instructional activities were used across the six
teachers in the case study. In examining the number of teachers using
each instructional activity, a few of the activities stand out as being
represented most widely.   All six teachers used questioning in the
observation periods and five of the six teachers modeled what they
expected from their students. Similar case studies which have examined
effective teaching have found that effective teachers of at-risk students
model and scaffold learning with their students.[145]

The teachers in our study also held high expectations of their students by
planning instructional activities and by asking questions across the range
of cognitive levels. These teachers saw their students as being able to
think beyond the recall level and to engage with content at comprehension
and beyond. Similar studies show that more effective teachers of at-risk
students emphasize making meaningful connections, rather than
memorizing disjointed facts.[146] In fact, one study found that minority
students from impoverished backgrounds whose teachers emphasized rote

learning performed more poorly on the National Assessment of Education Progress (NAEP) than students whose teacher emphasized reasoning.[147]

Student Engagement

A commonality among the six teachers was high student engagement. Low student engagement (20% or fewer) was not indicated for any of the observation segments across the six teachers. This study confirms the findings in previous studies that indicate that effective teachers actively engage students in learning.[148] Specifically, students perform better when they are engaged actively in learning through reading, writing, and questioning, rather than passive learning such as reading in turn.[149]

Teacher-Directed Versus Student-Directed Learning

One surprising finding of the study was that, in general, the teachers directed most or all of the learning throughout the observation segments. Only one of the five teachers allowed students to direct most or all of their learning. Studies do support the use of direct instruction in working with all populations of students[150] but the researchers anticipated that more direction of the learning would have been shared. However, please note that one of the limitations of the study was the single observation of teaching. It is not clear whether the teachers allow for more student direction at other times throughout the school day or the school year.

Questioning

The questioning analysis offers an exciting finding, confirmed by the Differentiated Classroom Observation Scale (DCOS): each teacher thoroughly integrated questioning and student response during instruction and they asked questions often. Questioning is viewed as an effective instructional strategy when working with all populations of students, including those at-risk of failure.[151] The questions the teachers in the case study asked reflected a range of cognitive levels. A study examining effective practices in high poverty schools found similar results, with questions focusing on higher and lower cognitive levels of learning.[152]

Conclusions

As noted earlier, there are a number of limitations for this study that should be acknowledged prior to the assertion of conclusions. They include:
1. This study is a case study examining the practices of six state or national award-winning teachers, a small sample.
2. The observation data were collected from a single two-hour classroom observation.
3. The variability was limited by the range of options on the observation instruments.

The following conclusions were drawn from the study:

When we examine the beliefs and practices of the six highly effective teachers of at-risk and/or highly mobile students included in this study, we find that these effective teachers:

- view the academic needs and the affective needs of their students equally. Unless one need is met, the other cannot be met.
- view their relationships with students, particularly trusting relationships, as paramount to their success as teachers and to the success of their students.
- expect their students to perform well by having a "whatever it takes" mentality and by planning challenging instruction that focuses on making meaning rather than on memorizing facts.
- view ongoing student assessment as integral to the instruction process.
- use a variety of instructional activities within the classroom.
- actively engage students in the learning process.
- use questioning to engage learners and as an integral part of their instructional strategies.

Recommendations

First and foremost, the conclusions from this study must be viewed as resulting from a particular set of research conditions in one study. As with most research studies, it is important to look at single studies within the body of research on the topic rather than in isolation. The following recommendations pertain to the larger body of research effective teachers and at-risk/highly mobile students, as well as to the identification and celebration of highly effective teachers.

1. While the extant literature is plentiful in regards to effective practices in working with at-risk students, more research is needed in identifying effective teaching practices in working with highly mobile students.
2. While difficult to track highly mobile students, particularly homeless and migrant students, more research into the long-term effects of teachers on these populations is needed.
3. State and national organizations should consider recognizing and honoring teachers who work with highly mobile students.

Appendix A

Interview Questions for Participating Teachers

Effective Teaching and At-risk/Highly Mobile Students:
What Makes an Effective Teacher?
INTERVIEW QUESTIONS

(semi-structured interview; major questions in bold print, with follow-up probes in regular type)

Preface/Introduction

As you know, we are interested in learning what qualities are especially important for a teacher to be effective with at-risk/highly mobile students. There are varying definitions of highly mobile. Some researchers have included students who change schools more than six times in their K-12 education; others included students who moved more than once a year. Students who are homeless, members of migrant worker families, living in poverty, and children whose parents are in the military often meet this definition.

Can you describe the mobility you experience in your classroom?
This year:
- **How many students arrived in your class after the start of the school year?**
- **How many students have already withdrawn from your class?**
- **For what were the reasons did these moves occur (to the best of your knowledge)?**

Can you describe the factors that you experience in the classroom that contribute to a student being at-risk of failing?
- **How many students in your classroom are at risk of failing?**
- **What are the reasons for the student being at risk of failing?**

What learning experiences have been the most valuable to you in your own professional development in working with at-risk and highly mobile students, and why?

What was the most influential aspect of your preservice preparation?
What has been the most influential inservice professional development experience?

How would you describe your relationship with your students?

What role does that relationship play in your success as a teacher?
What praise would you value most from a student?

How do you ensure that your classroom environment is conducive to learning?

How do you address the needs of at-risk and/or high mobility students with classroom management?
How do you maintain classroom continuity in a highly mobile environment?
How do you create a learning community in a highly mobile environment?

How do you use physical space to promote a learning environment?

Describe your instructional planning process.
What questions do you ask yourself as you prepare a lesson, a unit, a course, or any other learning experience for students who are at-risk and/or highly mobile?
To what level of detail do you develop your lessons?

How do your teaching methods promote understanding and skills development in the content area(s) you teach?
What strategies do you find most useful in working with at-risk and highly mobile students?
What needs do you see most frequently?
How would you evaluate your questioning skills?
How do you maintain student engagement throughout the lesson?

How do you respond to the range of student differences in the classroom?
What do you do to support students who are at-risk and/or highly mobile?
How do you assess student learning with students who are at-risk and/or highly mobile?
How do you handle homework with students who are at-risk and/or highly mobile? What are the challenges and what strategies have worked?

What external supports resources beyond your classroom do you use to address the needs of at-risk and/or highly mobile students?
How do you interact with school, district, and/or community supports?
What types of interaction do you have with parents?

What evidence do you examine to evaluate the success of your teaching?
What do you find to be your greatest challenges in teaching?
How has your teaching evolved over time?

Create a metaphor that describes how you think about teaching students who are at-risk and/or highly mobile.
How does this metaphor illuminate key aspects of your teaching?

What do you think was the most important factor in your teaching that led to your achievement of the national and/or state award?

What recommendations would you make to prepare new teachers to serve at-risk and/or highly mobile children?

Appendix B

Instruments for Classroom Observations

Questioning Techniques Analysis Chart

Observer:_____   Date:_____
Teacher:_____   Start & End Times:_____
Grade/Subjects:_____   School: _____

On a separate piece of paper, record all instructional questions asked by the teacher, orally and in writing, for one hour during the language arts lesson. In addition, also include student generated questions and designate with an "S." Omit procedural questions, such as "Would you read the directions?" Note any question that the teacher answers by circling it in your notes. After the observation, write in 3 examples of each question type in the grid below. Next, tally the number of questions at each level by teachers and students (separate count for each) and calculate a percentage at each level. Attach the entire script of questions asked.

Type of Question	Total #	Percent
Low Cognitive Demand (Knowledge**)** *Teacher generated-* *Student generated-*		
Intermediate Cognitive Demand **(Comprehension & Application)** *Teacher generated-* *Student generated-*		

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Questioning Techniques Analysis Chart

Type of Question	Total #	Percent
High Cognitive Demand **(Analysis, Synthesis & Evaluation)** *Teacher generated-* *Student generated-*		

Total # of Teacher Generated Questions:_____
Total # of Student Generated Questions:_____

Guide for Categorizing Questions for
Questioning Techniques Analysis Chart

Type of Question	Teacher Generated (What does T ask S to do)	Student Generated
Low Cognitive (Knowledge or Recall of information)	Outline Recognize Recite from memory Identify Name Order Recall List Define	Procedural Questions (ie. Can I do… What goes here… How do I…
Intermediate Cognitive Demand (Comprehension and Application)	Discuss Classify Interpret Explain Create own meaning Predict Problem-solving Demonstrate	Curiosity Questions: Relating to another topic Asking for more information Using information in another context Adding to teacher explanation with own
High Cognitive Demand (Analysis, Synthesis & Evaluation)	Compare/Contrast Ask for cause/effect Ask about relationships between ideas/things Ask to differentiate Design or create (not copy) Plan Perform Predict outcome Evaluate/judge	Evaluation Questions: What do you think happens… Why …. What happens if…

Differentiated Classroom Observation Scale Protocol

Pre-Observation Phase

Before going to the teacher, the observer will contact the teacher to find a time that is convenient for the observation. The following will need to be arranged before the observation date:

- Permission to observe from teacher
- Copy of lesson plan
- Teacher will visually identify targeted group of students in classroom (with color-coded name tags or teacher's chosen strategy)
- Teacher is made aware that there is a brief (5 minutes or so) pre-observation interview, and a short post-observation debriefing.

Pre-Observation Interview

Before beginning the interview, please arrange to have the following questions answered. Some of this will be facilitated with prior contact with the teacher. In particular, having a copy of the lesson plan in advance would make the following questions less laborious for the teacher to answer prior to the observation period. This is an informal interview that is merely to gain essential descriptive information.

1. Is this lesson tiered?   ___ *Yes (based on identification status)*
                                        ___ *Yes (not based on identification status)*
                                        ___ Not explicitly, but cluster grouping will be used
                                        ___ No, all students completing same activities

2. Who developed this lesson?   ___ This teacher
                                        ___ Other: _____

3. How closely will you be following the pre-designed lesson plan?

4. Have you used this lesson before? What success have you noted with this lesson regarding this identified population?

5. Are learning contracts being used?   ___ Yes (multiple identified students)
                                              ___ Yes (single identified student)
                                              ___ Yes (not related to identified status)
                                              ___ Yes (IEP-determined)
                                              ___ No

6. Has any of this lesson been compacted for any child? If so, please explain the alternate learning activities that are substituting for the lesson.

7. What are the goals/objectives of this lesson?

8. Anything else the teacher wants to add before the observation:

Classroom Observation Phase

School: _____   Teacher: _____
Time of observation: _____
Total number of students: _____   Number from identified group: _____

List additional adults in room, including time in room, role, and number of children served:

Five-Minute Segment Scoring (use DCOS Scoring Sheet)

During the observation period, please indicate for each 5-minute segment which of the followin instructional activities were in practice (see Table 1). There will be at least one per segment, an each segment will likely have more than one. The segment ratings should be marked separately the two groups of students: "Identified" and "Not identified." In the event that there is no way t distinguish between the two groups, make whole-group ratings in the "Not Identified" group location only.

In addition to the instructional activities, please also rate student engagement, cognitive level, ar "Learning Director" for each 5-minute segment.

Table 1

Instructional Activity Codes

Instructional Activity	Code	Description
Lecture	L	Teacher lecturing to group of students
Lecture with Discussion	LD	Teacher-led lecture, with periodic student discussion (recitation)
Class Discussion	CD	Discussion in class, students are primary discussants
Small Group Discussion	GD	Discussion in class, but in small groups, not whole group
Problem Modeling by Teacher	PM	Teacher demonstrating how to execute a task (e.g., working a math problem on board)
Student Presentation	SP	Student(s) presenting information to the class (either planned presentation or on-demand task)
Demonstration by Teacher	D	Teacher demonstrating a procedure to the class (e.g., how to safely use lab equipment)
Questioning by Teacher	Q	Teacher asking question of student(s) in group setting
Student Responding	SR	Student(s) answering questions posed by teacher (choral response included in this category)
Manipulatives	M	Student(s) working with concrete materials to illustrate abstract concepts (e.g., math blocks)
Cubing	C	Student(s) working with cubing curriculum materials (differentiated see Adams & Pierce, *in press* for details)
Learning Center(s)	LC	Student(s) working at planned learning center(s) individually or in small groups (computer stations can be included if they are planned activities)
Anchoring activity before lesson	AB	Use of lesson anchoring materials prior to teacher presentation of content. (see Adams & Pierce, *in press* for details)
Anchoring activity during lesson	AD	Use of lesson anchoring materials during teacher presentation of content.
Anchoring activity after lesson	AA	Use of lesson anchoring materials after teacher presentation of content.
Seat work-Individual	SWI	Student(s) working at desk on academic materials (independently)

Seat work-Group based	SWG	Student(s) working at desk on academic materials (groups)
Cooperative learning	CL	Students working in a planned cooperative structure to complete a task.
Role Playing	RP	Student(s) engaged in role play exercises (e.g., "playing store" to practice counting change).
Teacher interacting with individual student	TIS	Teacher working with/talking to/helping individual student
Teacher interacting with small group	TIG	Teacher working with/talking to/helping small group of students
Technology use-Students	TS	Technology being used by students for related learning activities
Technology use-Teacher	TT	Technology being used by the teacher for presenting instructional content
Assessment activity	A	Student(s) engaged in a formalized assessment activity (e.g., test; performance)
Pull-out activity, individual or group	PO	Student(s) removed from the room – no observation of these students possible
Other	0	List "other" activities

Student Engagement, Cognitive Activity, & "Learning Director"

These are global ratings for each 5-minute segment. Thus, each segment will have only one rating for each of these two domains, the rating that is most representative of that time period for that group.

Student Engagement	Cognitive Activity	"Learning Director"
L – Low engagement = 20% or fewer of students engaged in learning **M** – Moderate engagement = 21 – 79% of students engaged in learning **H** – High engagement = 80% or more students engaged in learning	Remember Understand Apply Analyze Evaluate Create Ratings are made in each segment following the given scale: **1** – Not evident **2** – Evident **3** – Well-represented	*Who directs the learning, or makes the decisions about the learning activities.* Use the following scale for making your segment ratings for the identified groups: **1** – Teacher directs all learning. **2** – Teacher directs most learning. **3** – Teacher and student share learning decisions **4** – Student directs most learning **5** – Student directs all learning

Teacher: _____   Date: _____

Differentiated Classroom Observation Scale: Scoring Form

Identified

		1	2	3	4	5
Activity						
Engagement		□L □M □H	□L □M □H	□L □M □H	□L □M □H	□L □M □H
	Know	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Comp	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
Cognitive	**Appl**	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Anal	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Eval	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Create	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
Learning Director		① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤

Not Identified

		1	2	3	4	5
Activity						
Engagement		□L □M □H	□L □M □H	□L □M □H	□L □M □H	□L □M □H
	Know	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Comp	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
Cognitive	**Appl**	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Anal	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Eval	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
	Create	① ② ③	① ② ③	① ② ③	① ② ③	① ② ③
Learning Director		① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤

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Holistic Observation Ratings
At the conclusion of the segment ratings, complete the following items, PRIOR TO the teacher debriefing.

Please describe how grouping (if any) occurred in this classroom:

Were differentiated practices used in the classroom for Identified and Not-Identified students?
___ Yes   ___ No

If yes, please rate each of the following items based on your OVERALL perception, for each group separately. **If No**, simply respond in the "Not Identified Group" column, using the following scale for both:

SD	D	N	A	SA	NA
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not able to respond, lack of evidence (use sparingly).

	Identified Group	Not Identified Group
This lesson encouraged students to seek and value multiple modes of investigation or problem solving.		
Students were reflective about their learning.		
The instructional strategies and activities respected and accounted for students' prior knowledge.		
Interactions among students demonstrated collaborative learning environment.		
The teacher clearly enjoyed working with this group.		
Teacher demonstrated high level of content knowledge for lesson topic.		
Transitions between activities were smooth and well coordinated.		
Group procedures were clear, established, and understood by the students (automaticity was evident).		
Anchoring activities were readily available and appropriate.		
The classroom management plan was clear and effective.		
Learning activities were primarily student-directed.		
Teacher served primarily as a "Sage on the Stage" to this group.		

Post-Observation Debriefing & Reflection

Appendix C

Codes for Content Analysis of Interview Data

	Affective Needs (AF) *Includes helping students develop a sense of belonging, developing intrinsic motivation, attending to emotional needs*	Academic Needs (AC) *Includes focusing on the academic achievement and academic progress of students*	Technical Needs (T) *Includes focusing on the outside needs of at-risk/highly mobile students such as assistance with food, housing, referrals to agencies*	Other
Prerequisites or Background (B) • Preservice and Inservice Training • Certification • Experience	AFB	ACB	TB	OB
Teacher as a Person (P) • Caring • Interactions with Students • Fairness and Respect • Reflection	AFP	ACP	TP	OP
Classroom Management and Organization (CMO) • Physical space • Responding to student behavior • Developing a learning community	AFCMO	ACCMO	TCMO	OCMO
Planning and Organizing for Instruction (PO) • Focusing on Instructional Time • Using resources in planning • Time Management • High expectations when planning	AFPO	ACPO	TPO	OPO
Instructional Delivery (ID) • Strategies • Questioning • Differentiation • High expectations • Student Engagement	AFID	ACID	TID	OID
Monitoring Student Progress and Potential (MP) • Homework • Providing meaningful feedback • Assessing students	AFMP	ACMP	TMP	OMP
Other	AFO	ACO	TO	OO

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