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The Impact of the Instructional Practices Inventory At an Illinois Middle School

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At an Illinois Middle School

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

This participatory action research study followed a middle school for two academic years to determine if incorporating the Instructional Practices Inventory (IPI) would increase classroom experiences that engaged students in learning and encouraged deeper, higher-order thinking skills. This study also used student standardized test scores, the Illinois Standards Achievement Test (ISAT) and Northwest Evaluation Association Measures of Academic Progress (NWEA MAP), to determine if there was a relationship between the IPI process and improved test scores. I worked as the IPI coder, researcher, and facilitator for this study. During the research study, I kept field notes and observational data.

Utilizing the IPI process, I created a series of "snapshots" to measure student learning experiences during a typical day at Kaskaskia Middle School (a pseudonym). The "snapshots" of learning experiences were collected during my focused walks through the middle school. A focused walk occurred when an educator, trained and approved in the IPI coding process, systematically walked through a school, recording a minimum of 100 classroom observations, and used the IPI tools to assess classroom learning experiences. Use of a trained and approved IPI coder was critically important, because the IPI required an understanding of -- and fidelity to -- the process for the purpose of collecting and processing accurate data.

Using the data collected from these snapshots, I created pie charts for core, non-core and all classes, depicting my observational data. I presented these engagement profiles to the faculty for their analyses. This procedure encouraged faculty collaboration, an important tenet in the IPI, in both small and whole groups. The focused

walks, followed by faculty analysis and collaboration, were repeated six times during the two-year study. During year two, I created longitudinal data to look for possible trends in student-engaged learning and test scores.

From this study, data from MAP and ISAT tests showed a strong, upward trend. In addition, faculty collaboration improved during the use of the IPI. Implications for this research include the recommendation to continue the IPI process throughout this district, with the possibility of expanding to other school districts.

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Chapter One: Introduction

"I am always ready to learn, although I do not always like being taught."
Winston Churchill (1874–1965)

Background of the Problem

In 1983, the National Commission for Excellence in Education released what has since become a landmark report, *A Nation at Risk: The Imperative for Education Reform*. In what the educational commission has called "an open letter to the American people," the commission found that "declines in educational performance" were largely attributed to "disturbing inadequacies in the way the educational process itself is often conducted" (A Nation At Risk, 1983, p. 1). The report recommended that significant changes be made in public education in order for American students to remain competitive in the changing global market (A Nation At Risk, 1983, p. 1).

Since then, Illinois—like the other 49 states—has seen myriad transitory report cards attempting to evaluate instructional methods and students' academic progress. One of those report cards, the Elementary and Secondary Education Act (ESEA), was resurrected by President George W. Bush in 2001 and reinvented as the No Child Left Behind Act (NCLB) (Slavin, 2002). The demands made in the NCLB may be the most daunting challenge yet in the arena of these report cards. With NCLB, individual schools are not only held accountable for the academic progress of the overall school population, schools are also accountable for the academic progress of specified subgroups, including the special education population, students qualifying for free or reduced lunch, and students with limited English proficiency (U.S. Department of Education, 2004).

Since NCLB, districts' test scores have been made public, with school districts' funding and accreditation linked to test results (Danielson, 2002). NCLB uses the phrase

"scientifically-based research" 110 times, stipulating that schools must use "rigorous, systematic and objective procedures to obtain valid knowledge" (Slavin, 2002, p. 16). Through the use of teaching practices that have been supported by scientifically-based research, NCLB expects students to meet or exceed AYP, the term used for consistent, incremental progress, with the expectation that all students will be proficient by 2014 (The Press Secretary, 2002). With NCLB, districts can no longer hide behind the achievement scores of an entire school population; individual schools are accountable for the academic performance of individual students.

As a result, middle school administrators and teachers from Illinois collectively began to seek cutting-edge methods of instruction to help students meet or exceed the state requirements on the *Illinois Standards Achievement Tests* (ISAT), the testing vehicle Illinois policymakers have chosen to measure AYP in conjunction with NCLB requirements. Middle school students are tested in seventh and eighth grades to measure yearly growth in the areas of mathematics and reading. However, a school's ability to meet AYP benchmarks is not based on the average of the whole student body being tested. Instead, NCLB requires accountability for all students, including the specifically targeted subgroups also expected to make AYP (Gaylor, 2003; U.S. Department of Education, 2004). Such intense focus on assessment scores may "detract focus from the other and, perhaps, most important goal of testing—checking for evidence of student learning" (Matthews, 2007, p. 1).

Why Assess

When analyzing assessment tools, the place to begin is a "clear sense of why" the assessment is needed, as well as what the assessment tool is being asked to assess

(Stiggins, 1997, p. 21). Traditionally, middle school assessments are used by a variety of stakeholders for a variety of purposes. Policymakers and politicians primarily use assessments for the purpose of setting state standards, evaluating school quality, and providing direction for educational funding. School administrators may use assessments as a tool to "identify strengths and weaknesses" in the curriculum and "designate program priorities" (Dietel, Herman, & Knuth, 1991, ¶ 3). Teachers often use assessments as a way to evaluate and refine the curriculum while monitoring student progress and determining individual grades. Parents and students also seem to view assessments as a way to monitor a student's progress. Additionally, community members may use assessment scores to "determine the school's accountability" (Dietel et al., ¶ 5).

If student learning is an important function of the middle school, then assessing student learning should be an integral component of the educational process. Today's successful educators must "conduct high-quality assessments that accurately reflect achievement expectations" (Stiggins, 1997, p. 25). Assessments can be used to evaluate a student's growth, promote learning, and shape a teacher's lessons (McTighe & O'Connor, 2005). Likewise, when educators use assessments to systematically follow a student's growth, teachers can make "adjustments in the educational system that result in real improvements in student achievement" (Jones & Mulvenon, 2003, p. 13).

With the mandates of NCLB, the demands placed on assessment methodologies have increased. Now, assessment tests also seem to be the measurement tool to determine not only a school district's success, but also the success of individual schools within the district. There may be serious consequences for districts and schools that do not meet state mandates. While the stakeholders—parents, students, teachers, administrators,

policymakers, and community members—have needs to be addressed through the use of assessments, the logical question is whether any method of evaluation can be used as a one-size-fits-all way to meet them. Stiggins (1997) stated, "there is no single assessment capable of meeting all of these different needs" (p. 25). Danielson (2002) concurred, explaining, "there are many different kinds of learning goals," so the assessments being used "must be appropriate to the types of goals being assessed" (p. 85). Therefore, the educational community is left asking what assessments can be used to meet the demands of the students, parents, teachers, administrators, and policymakers while maintaining focus on education's primary goal, which is to help all students learn to their maximum potential.

In an effort to measure students' learning, NCLB legislation requires schools to annually collect and analyze data. Schools, in an effort to receive more frequent assessment feedback, often use commercial assessment tools, such as Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP) tests, to provide valuable assessment data several times throughout the year. Many educators warn that meeting AYP should not be the main impetus for improving learning. Instead, educators should keep an eye on AYP benchmarks, use instructional tools that will positively affect student learning, and focus on the primary goal of "increas[ing] the achievement and understanding of all students" (Depka, 2006, p. 13).

Key Terms

Adequate yearly progress (AYP): "To achieve the goal of all children being 'proficient' (as defined by each state) by 2014, all public schools and districts must make satisfactory improvement each year toward that goal" (MODESE, Strategic Plan, ¶ 1).

Assessment: "*Assessment* may be defined as 'any method used to better understand the current knowledge that a student possesses.' This implies that *assessment* can be as simple as a teacher's subjective judgment based on a single observation of student performance, or as complex as a five-hour standardized test" (Dietel et al., 1991, ¶ 1).

Collaboration: Educators who "work together to achieve their collective purpose of learning for all" (DuFour, 2004, p. 8).

Efficacy: "A teacher's belief that he or she has the skills necessary to effect positive changes in student learning" (Distad & Brownstein, 2004, p. 7).

Focused walk: When an educator trained in IPI coding walks through a school, recording a minimum of 100 observations, and uses the IPI instructional tools to assess the learning experiences occurring in the classroom (Valentine, 2005).

Higher-order, deeper thinking: Skills that require a learner to go beyond merely recalling information, including analyzing, creating, applying, evaluating, and synthesizing (Bloom, 1956).

Illinois Standards Achievement Test (ISAT): The standardized test Illinois public schools use to measure student achievement (Illinois State Board of Education, 2009b).

*Instructional Practices Inventory (IPI)***:** The creation of Dr. Jerry Valentine and Dr. Brian Painter; a "process for profiling student-engaged learning activities" through the use of collecting data, creating school-wide learning profiles, and encouraging faculty collaboration. (Valentine, The Instructional Practices Inventory, 2005, ¶ 3)

Measures of Academic Progress (MAP): The name of the assessment test used by Northwest Evaluation Association (NWEA); "state-aligned computerized adaptive tests

that accurately reflect the instructional level of each student and measure growth over time" (Northwest Evaluation Association, 2008, ¶ 3,).

Middle level schools: Schools for students from grades 5 through 9 (Valentine, 2009).

National Board Certification:

> National Board Certification is achieved upon successful completion of a voluntary assessment program designed to recognize effective and accomplished teachers who meet high and rigorous standards based on what teachers should know and be able to do. . . . National Board Certification is an advanced teaching credential. It complements, but does not replace, a state's teacher license. . . . As part of the certification process, candidates complete 10 assessments that are reviewed by trained teachers in their certificate areas" (National Board for Professional Teaching Standards, 2008, ¶ 2).

National Board for Professional Teaching Standards: "NBPTS is an independent, nonprofit and nonpartisan organization . . . to create a system of advanced certification for teachers based on high and rigorous standards. NBPTS developed the National Board Certification process and certifies teachers who successfully complete related assessments" (National Board for Professional Teaching Standards, 2008, ¶ 1).

Northwest Evaluation Association (NWEA): A nonprofit organization that offers state-aligned, adaptive assessment tests for schools (Northwest Evaluation Association, 2008).

Reflection: The thought processes a teacher uses when analyzing or evaluating information (National Board for Professional Teaching Standards, 2008).

School-level variables: "A smaller set of other factors, such as family background" (Fullan, 2007, p. 166).

Student-engaged learning: When students utilize higher-level thinking skills that involve synthesis, analysis, creativity, research, cooperative learning, problem-based learning, and other forms of student-engaged learning that encourages students to use higher-order thinking skills (Valentine, Middle Level Leadership Center, 2006).

Subgroup: No Child Left Behind defines a subgroup as (a) students who are minorities, (b) students who come from low income homes, (c) students who have limited proficiency in English, and (d) students who have disabilities (Missouri Department of Elementary and Secondary Education, 2008).

Transformational principals: Principals who, through collaboration, "focus on restructuring the school by improving school conditions" (Stewart, 2006, ¶ 7).

Typical school day: A school day when no "unusual circumstances" are taking place (Valentine, 2005, p. 5).

Historical Background for the Middle School

From reviewing the literature, the mission of schools seems simple: to help students learn. However, this mission is anything but simple to achieve. Besides academic growth, students 10 to 14 years of age are in the "developmental period between childhood and adulthood, experiencing the physical, cognitive, social, personal, and moral changes associated with moving from childhood into late adolescence" (Muth & Alvermann, 1999, p. 12). Thus, educators face middle school students who are learning in multiple areas beyond the core curriculum.

Educators have addressed the needs of young adolescents by creating middle level schools, but even these schools have a long history of evolving with the times (Dickson, 2001). In the 1960s, many educators viewed the junior high school as a miniature version of high school. While the junior high was initially established as an "effort to separate the early adolescents and to provide programs uniquely designed for them," critics have complained, "a knowledge base was not available to sustain the uniqueness of the reform movement" (Anfara, 2001, p. 9).

In 1969, the Association for Supervision and Curriculum Development (ASCD) formed a committee to determine the importance of the middle school; 1973 marked the inception of the National Middle School Association (Anfara, 2001). As the middle school evolved, proponents encouraged a new school concept that included "team teaching, individualized instruction, flexible scheduling, and some form of continuous progress" (Anfara, 2001, p. 9).

In 1989, the Carnegie Council on Adolescent Development released *Turning Points: Preparing American Youth for the 21st Century,* a report that directed schools to move away from the junior high concept that copied the structure of a high school and instead make use of the middle years as a time to address social needs as well as academic needs (p. 8). In 1982, The National Middle School Association (NMSA) published a position paper that was first revised in 1992, and again in 1995, entitled *This We Believe*. The paper provided 12 characteristics believed to define a model middle school as one that provided emotional guidance for students and "varied teaching and learning approaches," along with "assessment and evaluation that promote[d] learning" (Lipsitz, 2003, p. 16). However, in the more than 25 years that have passed since the

original NMSA version, middle schools have been under attack by researchers who question whether the emphasis on providing social development may also interfere with the educational mission for students to learn. Some believe that providing for students' social development costs classroom time that should be spent on providing students with a challenging curriculum (Anfara & Lipka, 2003; Killion & Hirsh, 1998). From my background as an educator in both middle school and junior high school, I prefer the middle school concept, where emphasis is placed on the child's academic and social growth. Because of my personal preference, this study was conducted at a middle school rather than a junior high school.

As NCLB increases the demands for assessment, educators are looking for ways to maintain the middle school concept while creating a rigorous curriculum that is directed at improving students' academic achievement. While the socialization of students is certainly important, emphasis on student learning is the primary focus of many educators. With one eye on the changing mandates of NCLB and the other on the middle school concept, some educators are turning toward student achievement as the "highest priority in the mission of the middle level school" (Williamson, Johnston, & Kanthak, 1995, p. 6).

In a speech given at University of Georgia, middle school researcher John Lounsbury warned his audience of teachers, "We are in danger of winning the battle of test scores but losing the battle of education" (Dickinson, 2001, p. 80). When Jon Nori (2002) interviewed middle school proponent Jerry Valentine, director of University of Missouri's Middle Level Leadership Center, Dr. Valentine challenged educational

leaders not to neglect the foundation of the middle school concept in the race to raise achievement scores:

> Effective leaders understand that there is commonly accepted knowledge about which practices are best for young adolescents, among those practices are interdisciplinary teaming, integrated curriculum and instruction, exploratory and encore programs, advisement programs, co-curricular programs, and intramural programs. But middle school education is not necessarily a set of defined programs, and this is an important concept. Each of the programs that is commonly referred to as part of middle level education was derived from a solid base of knowledge about developmental appropriateness for young adolescents. (as cited in Nori, 2002, p. 40)

While striving to improve student learning opportunities and increase assessment scores, effective middle school educators should work from a "solid base of knowledge," respecting the many facets of growth that affect young adolescents.

Effective Middle School Educators

As far back as Socrates, the ability of an effective teacher to have a positive impact on student learning has been an accepted educational tenet. In order for students to grow and achieve, an effective teacher makes myriad adjustments to foster individual student growth. The importance of an effective teacher has been supported through research. Educators consider many variables when looking for possible ways to be more effective when working to increase students' academic growth. Poverty, lack of parental involvement, and large class sizes were three out of a long list that, because of time and research constraints, were not part of this study. I concede that many variables come into

play when educators seek to understand what influences some students to not achieve to their potential. However, one variable that will be discussed in my research is the importance of teacher effectiveness.

Educational researcher William Sanders (2000) stated that research "clearly indicates that [the] difference in teacher effectiveness is the single largest factor affecting academic growth of populations of students" (p. 330). In a study completed in 2004, data analysis "support[ed] the idea that there are substantial differences among teachers in the ability to produce achievement gains in their students" (Nye, Konstantopoulos, & Hedges, 2004, p. 253). When considering "what constitutes an effective school," Marzano (2007) observed that the "one factor that surfaces as the single most influential component of an effective school is the individual teachers within that school" (p. 1).

Many variables, from education to experience to attitude, are woven into the fabric of an effective teacher. Likewise, numerous factors contribute to the characteristics that define the ineffective teacher. However, "teacher ineffectiveness is not necessarily a permanent condition" (Sanders, 2000, p. 334). A faculty's ability to learn and improve should be viewed as a "collaborative rather than an individual task" (DuFour & Eaker, 1998, p. 27). When teachers engage in collaborative learning, the effect can "creat[e] momentum to fuel continued improvement" (p. 27).

The heart of this study focused on a middle school that looked for that momentum. As a part of the school's focus on improvement, I facilitated an action research study that incorporated myriad components that include transformational leadership, teacher efficacy and reflection, assessments on standardized tests, and teacher

collaboration. In this study, I facilitated and participated in the Instructional Practices Inventory (IPI), a school improvement plan that could lead to school-wide improvement.

Setting for this Study: The District

This participatory action research study focused on Kaskaskia Middle School (a pseudonym), the only middle school in a rural, middle-class community of 10,000. Illinois School District (also a pseudonym) draws students from three counties in southern Illinois; the school is located 30 miles from a major metropolitan city. In addition to KMS, the district has five elementary schools and one high school. Three schools are designated as Title 1 schools. The district's population is stable, with a low mobility rate of 7%. The rate of graduation for the district's sole high school is 92.7%, compared to the state's average of 85.9%. This community boasts an excellent record on a limited budget; the district's operating expenditure per student in 2005–2006 was $8,042 per student, compared to the state's per-pupil rate of $9,488. The average years of teaching experience for teachers in the district is 14.3, compared to the state's average of 12.3. Over half of the teachers, or 52.9%, have advanced degrees. This is in line with the state's average of 52.3% of teachers who have advanced degrees. Throughout the state, 3.2% of classes are taught by teachers who, according to NCLB guidelines, are not "highly qualified"; no teachers in this district fall into that category. There are 22 National Board Certified Teachers (NBCT) in this small district (Highland Community Unit School District #5, 2008).

The community values education and places high expectations on the school system. The district strives for excellence and encourages community involvement. In 1993, and again in 2004, the district began a 10-year Strategic Planning Process. This

process, based on community involvement in the schools, utilizes Strategic Planning Teams, made up of teachers, school board members, administrators, and citizens from cross-sections of the community. Team members, committed to school improvement, go through training to identify the district's strengths and weaknesses, with the goal of projecting a long-term vision for the district. The Strategic Planning Teams present their findings to the school board for their consideration (Highland Community Unit School District #5, 2008).

Setting for the Study: The School

Kaskaskia Middle School (KMS) is a single-level structure that was built in 2000. The structure, built to accommodate the middle school concept of teams, has 107,400 square feet to house over 500 seventh- and eighth-grade students. The facility has a track and athletic fields, and sits across the street from the district's only high school. At each grade level, students are randomly divided into two groups, called "red team" and "black team."

Mrs. Douglas (a pseudonym for the purpose of this study) became principal at KMS in 2005, after having taught nearly three decades at the district's high school. The previous principal, Mr. Emil (a pseudonym for this study), was hired as a junior high music teacher in 1973 at what was then called Kaskaskia Junior High School. Mr. Emil became principal in 1989. In 1994, Mr. Emil and the stakeholders for Kaskaskia Junior High adopted the middle school format and philosophy, changing the name to Kaskaskia Middle School; KMS stakeholders incorporated advisories, electives, team time, and collaboration time into the schedule. In 2006, because of financial cutbacks in the district, KMS lost its shared team time and some electives. The stakeholders still consider KMS a

middle school, although the loss of team collaboration time and electives makes the school a hybrid of the middle school and junior high formats.

> On the school's website, the principal has posted this informational welcome:
>
> [Kaskaskia] Middle School features an academic team configuration, expanded athletic facilities, a technology lab that combines state of the art technology with practical life skills, and additional features which enable us to better meet the needs of our students. We have two core interdisciplinary teams at each grade level. . . . Academic teams usually have about 130 students and 5 full time teachers. The teachers from each team meet for collaborative planning and to monitor student progress on a regular basis. KMS also offers students a variety of programs to complement their academic day. . . . The culture of [Kaskaskia] Middle School is built on the Very Important Principles or VIP Program. Responsibility, courage, respect, service, honesty, caring, fairness, self-control and citizenship are the fabric of our classes and activities everyday. At [KMS], "Everyone is Someone," and we teach our students to treat everyone in that manner. (Highland Community Unit School District #5, Highland Middle School, 2008, p. 1)

The 2007 Illinois State Report Card from the Illinois State Board of Education reported that KMS had a student body of 503 seventh and eighth grade students; 481 of those students, or 96.4%, were listed as White. The remaining 3.6% of students were Black (.04%), Hispanic (1.1%), Asian/Pacific Islander (1.0%), Native American (0.01%) and Multi-Racial (0.05%). Kaskaskia Middle School had 103 students, or 20.4%, who received free or reduced lunch; this is slightly lower than the district's 21.6%. At KMS,

72 students, or 14%, had Individualized Education Programs, or IEPs. Kaskaskia Middle School has 32 faculty members and two administrators.

At the time this research was conducted, I was a National Board Certified Teacher (NBCT) with three decades of teaching experience at the middle and high school levels. I had two master's degrees and was currently working on my EdD in educational administration. Being a NBCT deserves mention in this study, because the National Board for Professional Teaching Standards (NBPTS) provides a testing mechanism for teachers to earn master certification by demonstrating they are effective teachers who are part of a larger learning community and are committed to their students and learning.

The principal of KMS was also a NBCT. As part of the certification process, we demonstrated knowledge of teacher reflection, collaboration, and student-engaged learning. In addition, three of the 32 faculty members at the middle school were NBCTs. Four NBCT staff members, or 12% of the faculty, is a high percentage. As of December 2008, there were 74,000 NBCTs (National Board for Professional Teaching Standards, 2008), or only "three percent of the 3.1 million NBPTS-eligible teachers in the country" (Hakel, Koenig, & Elliott, 2008, p. 250).

Certainly not all effective teachers are National Board certified. Nor would I say that all such teachers are effective. However, I have observed high levels of skill, collaboration, content knowledge with reflection, and a commitment to professional growth in the 22 NBCTs in my district. In a review of educational studies, Stronge (2002) determined that data suggest that effective teachers engage their students in the learning process, collaborate with other teachers, and share lesson plans and ideas. Effective

teachers also demonstrate the ability to reflect, or review, their own teaching (Stronge, 2002, pp. 19–20).

Problem Statement

After conversations with the KMS principal during the summer of 2007, I learned that KMS had a history of above-state-average ISAT test scores, teacher collaboration, community involvement, and excellent leadership. However, the summer before this study began, the principal had received notification that a special education subgroup at KMS had not reached NCLB's AYP benchmark for the ISAT test.

Mrs. Douglas and I often attend workshops that are offered to NBCTs, to remain current with educational research. The summer of 2007, Mrs. Douglas and I attended a National Board workshop presented by Dr. Jerry Valentine, who explained and demonstrated the IPI, a school-wide process to encourage higher-order learning experiences for the students and collaboration for the staff. After Dr. Valentine's presentation, Mrs. Douglas and I toured schools that were using the IPI. After the workshop, Mrs. Douglas and I discussed using the IPI process at KMS, with the goal of raising achievement test scores, encouraging student-engaged learning, and fostering teacher collaboration and reflection. After a series of discussions, Dr. Valentine, Mrs. Douglas, the district superintendent, teachers' union, and KMS faculty each granted permission for KMS to use the IPI, with me serving as facilitator.

After receiving permission to study IPI at KMS, I met with Dr. Valentine at the University of Missouri. Together, we discussed the project facing me. The problem I addressed was in three parts. The first part of the problem was to use the IPI to record the type of student learning across six categories and to determine if achievement differed for

students based on their degree of engagement (see Figure 3). This study presumed that "teaching and learning are interactive" (Black & Wiliam, 1998, ¶ 7). When looking "inside of the black box," a metaphor researchers Black and Wiliam (1998, ¶ 6) used for the classroom, I used the IPI to document the degree to which students engage in higher-order thinking skills as part of the learning experience.

The second part of this problem discussed the KMS faculty's responses to the observational data that I presented from each of my focused walks. The focused walk was a tool used by a trained IPI observer to collect data pertaining to the students' learning experiences. The data, presented to the staff, became the focus of faculty collaboration. If the faculty analyzed data that reflected the students' learning experiences in a typical school day, would school-wide teacher reflection increase the number of student-engaged lessons, thereby improving the learning experiences in the "black box"? The classroom and school engagement profiles from the IPI would be used to foster the reflective process for the teaching staff.

The third part of the problem was related to assessment scores. Would increasing student-engaged learning opportunities in the classroom be reflected in improved assessment scores in the students' ISAT and MAP? In essence, was there a positive relationship between the degree to which students were engaged in learning, particularly higher-order thinking, and the achievement data from the standardized tests?

Research Questions

To create a guideline for this research project, the following questions were proposed:

1. Do IPI observational data foster teacher reflection and problem solving?

2. Do teacher reflection and problem solving, while using the IPI process, foster instructional change that leads to student engagement?
3. Do the instructional changes, using the IPI process, foster changes in student achievement, as evidenced by test scores?

Brief Outline of Methodology

Because my role will be "both research specialist and classroom teacher" (Best & Kahn, 1993, p. 24), this study will be an action research study. "Action research is focused on immediate application, not on the development of theory or on general application. It has placed its emphasis on a problem here and now in a local setting" (Best & Kahn, 1993, p. 24). In this study, the "problem" was to see if the IPI would increase student-learning experiences through faculty collaboration, with the hope of also increasing standardized test scores.

This study has two action research phases, divided between years one and two. In the first year, Phase One focused on the researcher and faculty understanding the problem, evaluating it, and introducing change; the second year, Phase Two, focused on the researcher and faculty evaluating the data at a deeper level and collaborating to improve the academic environment (Bassey, 1999, pp. 40–41).

"Action research is a process in which participants examine their own educational practice systematically and carefully, using the techniques of research" (Watts, 1985, p. 118). This study takes place in the context of the classroom, focusing on the learning experiences that make up a student's day. Within the context of this study, I will study teachers as they collaborate and reflect on improving students' learning experiences in the classroom. "Productive collaboration and reflection . . . move educators from

isolation to integration, making decisions by preferences to making decisions by principles, from focusing on episodic student benefits to cumulative effects" (Garmston, 1997, p. 45). In this action research study of a rural middle school, a collaborative inquiry process was used with the research guided by five stages (Ferrance, 2000, p. 9):

1. Identification of problem area
2. Collection and organization of data
3. Interpretation of data
4. Action based on data
5. Reflection

These steps are illustrated in Figure 1, where Ferrance (2000) shows the cycle for the researcher. Collaboration and staff development, while not shown in the illustration, are integral components to interpreting and evaluating the data.

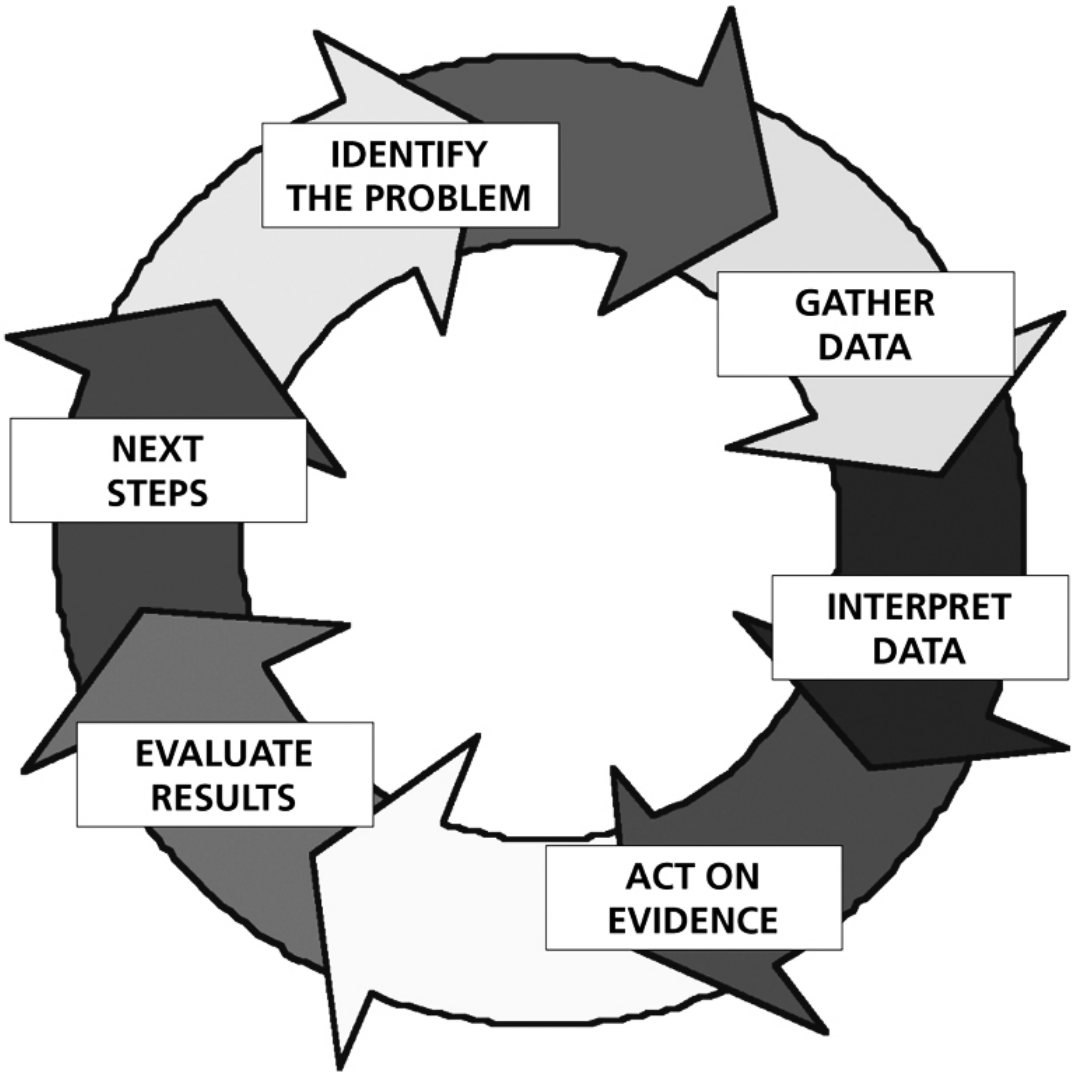


Figure 1. Action research cycle depicts the recursive process (Ferrance, 2009, p. 9).

Brief Outline of the IPI for This Participatory Action Research Study

In this study, I intended to facilitate and observe the faculty's use of Instructional Practices Inventory (IPI), an innovative approach to engage students in activities that encourage students to use higher-order thinking skills. IPI, an instructional tool, was "designed by Dr. Jerry Valentine and Dr. Brian Painter in 1995 and revised in 2002, 2005, and 2007 by Valentine" (Valentine, 2007a, p. 3). Currently, in 2009, Dr. Painter is an elementary school principal in St. Louis County; Dr. Valentine is director of the Middle Level Learning Center at University of Missouri-Columbia.

When describing the purpose of the IPI, Dr. Valentine stated, "The IPI data collection profile system was to establish processes for accurately measuring the nature of student-engaged learning from various instructional practices across an entire school" (Valentine, 2007a, p. 3). When a trained observer collected information by following the IPI protocols, the data "provid[ed] a valid picture of learning/instruction across a school or school system" (p. 3).

I chose the IPI with the hope that the number of student-engaged learning experiences at KMS would increase. That would demonstrate an increase in students' learning, as measured by improved student achievement scores in math and reading. With the IPI process, I intended to create a series of "snapshots" to measure student learning experiences during a typical day at KMS. The "snapshots" of learning experiences were collected in two academic years, from December 2007 through April 2009, during my focused walks through the middle school. During a focused walk, an educator trained in IPI coding walks systematically through a school, recording a minimum of 100 observations, and uses the IPI instructional tools to assess the learning experiences

occurring in the classroom (Valentine, 2005). (See Chapter Four for a detailed explanation of this process.)

Using the data collected from these snapshots, I presented engagement profiles to the faculty at school-wide meetings (Valentine, 2007b). Teachers studied the data, collaborated, and reflected on ways to improve the school-wide picture of student-engaged learning experiences. This procedure was repeated six times; teachers analyzed data from the focused walks and collaborated and reflected on the data. I examined school-wide teacher collaboration through observation and field notes. Using the focused walk data, I determined if the IPI fostered instructional change. I compared ISAT and MAP test scores to determine if there was a positive relationship between increased student-engaged learning experiences and improved student assessment scores.

In this participatory action research study, I used the IPI coding system, using the IPI protocol and the IPI rubric (see Figure 2 and Figure 3). I recorded the learning experiences I observed by using a series of numeric codes that ranged from one (students and teachers are disengaged) to a five or six (students are engaged in higher-level thinking skills). The observations occurred during three focused walks, or observations, a year—one in the fall, one in the winter, and one in the spring. During each focused walk, I followed IPI Observational Protocol (see Figure 3) and recorded a minimum of 100 classroom observations. The observations took place during typical school days. Dr. Valentine defined a typical day as a school day where "there are no known unusual circumstances occurring on that date that would disrupt the normalcy of the data, such as a field trip . . . or an outbreak of flu that necessitates 30 percent substitute teachers"

(Valentine, 2007a, p. 6). Part of the IPI protocol was to collect data on "typical" school days.

During this study, the teachers' anonymity was protected, as I recorded codes instead of teachers' names. With the IPI's coding system, I collected data over the course of two academic years, from December 2007 until April 2009. I observed whether or not using IPI strategies appeared to increase the number of engaged-learning experiences in the classroom.

I was trained by Dr. Valentine in IPI protocol and used IPI during classroom observations. I also implemented the IPI process during monthly faculty meetings, where faculty members were encouraged to incorporate in their teaching three important skills that have been demonstrated by effective teachers and are embedded in the IPI tool: engaged learning, collaboration, and reflection.

After observing and recording the learning experiences during my focused walk, I created a school profile and presented it to the faculty for discussion, reflection, and collaboration. "The purpose of the IPI data collection profile system was to establish processes for accurately measuring the nature of student-engaged learning from various instructional practices across an entire school" (Valentine, 2007a, p. 3). After reviewing the profile, teachers reflected on the data and discussed ways they could improve the school profile. Over the course of the study, I presented to the faculty six profiles—one for each focused walk. In this action research study, the faculty and I worked together, following Best and Kahn's (1993) goal description of action research as a study used "to improve the practices: to combine the research processes, habits of thinking, ability to work harmoniously with others, and professional spirit" (p. 25).

My district granted me six release days to use for my six focused walks; I observed teachers during the instructional day at KMS. After the school day, I also observed and facilitated faculty meetings where teachers and administrators collaborated and reflected as an entire faculty. During this study, as the staff implemented IPI, I considered these questions: Are the teachers implementing IPI? Are the teachers using lessons that engage the students in learning and higher-order thinking? When individual educators collectively work together by collaborating and reflecting on their teaching practices, will student learning and assessments improve?

Limitations of the Study

The following are limitations of this study:

1. The findings of this study are limited to possible observer bias. This bias should be negligible because I was trained in the use of the IPI process by co-creator of the process, Dr. Valentine, and was determined highly reliable as a data collector. My reliability was established through the IPI testing procedure where I scored 95% when I observed and coded a variety of classroom scenarios. Since completing the IPI testing procedure, I have completed both Level I and Level II instruction for the IPI. In addition, I have met independently with Dr. Valentine to discuss the nuances in coding.
2. The findings of this study are limited to the discrete categories and the way they are formulated and measured through the IPI process.
3. The findings of this study are limited to the meeting time allowed for collaboration with teachers.

4. The findings of this study are limited to test scores and their validity and thus the capacity of a standardized test to assess a student's learning or knowledge.
5. The findings of this study are limited to the two-year time span of the study.
6. The findings of this study are limited to the demographics of teachers and students at one middle school.

Outline of the Study

This dissertation is divided into six chapters. Chapter One provides background information for NCLB mandates and state-approved standardized tests. The first chapter provides an historical perspective of the evolution of the middle school, as well as the need for effective middle school educators and transformational leadership. Chapter One also presents the statement of the problem, the purpose, rationale and limitations of the study, as well as research questions and key terms appropriate to the research.

Chapter Two, a review of literature for the study, identifies six areas that serve as the foundation for this study: 1) Transformational Leadership, 2) Teacher Efficacy, 3) Student-Engaged Learning, 4) Higher-Order Thinking Skills, 5) Student Assessment, and 6) Faculty Collaboration and Reflection. Transformational leadership is explored to understand how the KMS principal's effective leadership can create a shared vision for positive change in the school. Once a transformational principal establishes with the staff a shared vision for change, the efficacy of the teachers is examined to understand the teachers' impact on student learning. Faculty collaboration and reflective practices are reviewed to understand their impact on KMS faculty's continuous educational growth. The classroom learning experiences that researchers accept as good instruction, those that engage student learning and higher-order thinking skills, are reviewed. Finally, assessing

a student's learning through standardized tests is reviewed, since this measurement tool is used to evaluate and direct the students' learning.

Chapter Three includes methods and procedures used to collect and analyze the data used in the study. Participatory action research methodology was chosen. This research method allowed me to focus on the teachers' growth through faculty collaboration and data gathered from the Illinois Standards Achievement Test (ISAT) and Northwest Evaluation Association's Measures of Academic Progress (NWEA MAP).

Chapter Four presents a description of the process of data collection using IPI by documenting and analyzing Phase One (academic year one); Chapter Five presents Phase Two (academic year two) of focused walks, along with the standardized test scores for ISAT and MAP. Qualitative data will be presented from my summaries of meetings and interviews with KMS teachers and administrators. Quantitative data from the focused walks and standardized test scores will also be part of this action research study. In addition, Chapter Five will discuss other instructional practices at KMS that could serve as variables in this study. Chapter Six presents conclusions, limitations and strengths of the study, and recommendations for additional research studies.

Chapter Two: Review of Related Literature

"Reading and writing, arithmetic and grammar do not constitute education, any more than a knife, fork and spoon constitute a dinner." John Lubbock (1834-1913)

Introduction

In this review of literature, I studied six key areas that concern my action research study. Because I saw the principal of KMS, Mrs. Douglas, as a transformational leader who had the skill and garnered the respect to galvanize teachers to move toward change, I included transformational leadership in my literature review.

Mrs. Douglas and the KMS faculty members created a school vision, "Doing what's best for kids," and worked daily toward that vision. Because the IPI encourages teachers to change their practice by increasing student-engaged learning experiences, I chose teacher efficacy and National Board Certification for Teachers to be part of my literature review. Dr. Valentine's IPI tool also encourages student-engaged learning experiences where students use higher-order thinking skills; research in these areas is included as well. This study uses students' ISAT and MAP test scores, so assessments are reviewed in this chapter. Finally, this chapter review includes teacher collaboration, another tenet of the IPI process.

Transformational Leader

Plutarch said, "The mind is not a vessel to be filled but a fire to be kindled" (as cited in Caldwell & Harris, 2008, p. 4). Certainly, the goal of every good educator is to instill a passion for learning. But in 2009, while educators light the fire, they must also design a workable curriculum that embraces state standards while being nimble enough to adjust to changing mandates and assessments. Today, educators focus on student learning while keeping a watchful eye on AYP benchmarks and the demands of NCLB. As school

districts work to improve student learning and assessment scores, the lessons taught in the classroom are being scrutinized with new vigor. At the center of that scrutiny is the curriculum leader of the school, the principal.

"Leadership has been conceived as the focus of group processes, as a matter of personality, as a means of inducing compliance, as the exercise of influence, as particular behaviors, and as a form of persuasion" (Layton, 2003, p. 13). The principal of an effective middle school is a curriculum leader who exercises influence and uses persuasion to address the educational, emotional, and social needs of a diverse population. With the demands of NCLB and AYP, the principal is also the "person held most accountable for problem-solving" (Cox, 2008, ¶ 1).

While the middle school principal wears many hats, one of the most important is that of a transformational leader. Educational literature offers a variety of subjective views on what makes a principal a transformational leader. According to Colton (1985), a transformational leader must have a vision that "define[s] not what we are but rather what we seek to be or do" (p. 33). Twenty years after Colton defined a transformational leader, Fullan (2002b) expanded the effective principal's role, adding that he believed the transformational principal also needed "sustainability" (p. 2), or the ability to establish a "solid leadership" with stakeholders for "large-scale, sustainable reform" (p. 1).

With that in mind, transforming a school vision into a reality can be an ongoing process instead of a one-time event (Fullan, 2002a). Fullan wrote that though leadership skills are complex and variable, he observed five traits shared by transformational leaders:

> . . . a strong sense of moral purpose, an understanding of the dynamics of change, an emotional intelligence as they build relationships, a commitment to developing and sharing new knowledge, and a capacity for making . . . coherence on the edge of chaos. (Fullan, 2002a, p. 1)

Glatthorn (2000) agreed, believing that rather than falling prey to "passing fads," a principal in the 21st century benefits from a "deep and broad knowledge base with respect to curriculum" (p. 3). Along with a knowledge of curriculum, Glatthorn listed five leadership behaviors that must occur if school reform, or transformation, is to occur: "(a) facilitating communication, (b) creating a positive open climate, (c) building a vision with the staff, (d) developing staff through involvement, and (e) being an effective and positive role model" (p. 28).

Transformational leadership did not have its inception in schools. Half a century ago, when President Dwight D. Eisenhower reflected on his military career, he discussed the need for a leader to have voluntary followers. Eisenhower asserted, "I would rather try to persuade a man to go along, because once I have persuaded him, he will stick. If I scare him, he will stay just as long as he is scared, and then he is gone" (Sundquist, 1968, 412). Instead of imposing his formidable power on others, Eisenhower saw the merit of "facilitative" power (Liontos, 1992, ¶ 1). This facilitative power, used by military leaders like Eisenhower, is also an effective tool for the transformational principal.

Transformational leadership in North America began as a concept for business leaders, but gained momentum for educators in the second half of the Twentieth Century. In the 1970s, James McGregor Burns developed the concept of transformational leadership after studying leaders in politics, military, and business (as cited in Liontos,

1992). Burns's (1978) definition of leadership included "leaders inducing followers to act for certain goals that represent the values and the motivations—the wants and needs, the aspirations and expectations—of both leaders and followers" (p. 11).

Bass, a follower of Burns's philosophies, asserted that a transformational leader places a greater emphasis on the support staff as he "inspires followers to commit to a shared vision . . . challenging them to be innovative problem solvers and developing followers' leadership capacities" (Bass & Riggio, 2006, p. 4). Bass also emphasized that a transformational leader is one whose strong sense of ethical morality and values are embedded in the leader's core vision (Bass & Steidlmeiera, 1999).

Leithwood (1992), a disciple of Burns's and Bass's leadership philosophies, supported school restructuring by "building a shared vision, improving communication, and developing collaborative decision-making processes" (¶ 3). Leithwood's philosophy, however, encourages restructuring from the bottom up, "emphasiz[ing] participative decision-making as much as possible" (¶ 2), rather than the traditional school philosophy of "top-down power," where the administration makes decisions. Leithwood views transformational leadership as "consensual and facilitative in nature, manifested through other people, not over other people" (¶ 2). While public school administration in the twentieth century leaned toward autocratic leadership, over the last two decades many administrators have viewed transformational leadership as translating well to school administration, with administrators and faculty working toward a shared vision and school-wide collaboration.

Leithwood (2004) as cited in Fullan (2007) conducted a multi-year study of existing data pertaining to "how leadership influences student learning" (p. 166). The

results of Leithwood's research found that successful school leaders practiced three core values, listed below, along with Fullan's explanatory notes in parentheses:

1. Setting directions (shared vision and group goals, high performance expectations)
2. Developing people (individual support, intellectual/emotional stimulation, modeling)
3. Redesigning the organization (collaborative cultures and structures, building productive relations with parents and the community (p. 166).

In his multi-year study, Leithwood and his team discovered that these three core values were widespread in his study of schools. In addition, from this comprehensive study, these researchers found that "school leadership accounts for one quarter of the variation on student achievement explained by school-level variables" (p. 166).

How does transformational leadership by a principal translate into a positive impact on the teacher in the classroom? Transformational principals use group problem solving to create and maintain a collaborative school culture, where teachers and administrators work as a team toward continuous improvement in student learning (Poplin, 1992). Rather than being dictatorial in the decision-making process, the transformational leader stresses "the need for teachers to be involved in decision-making within schools" (Shautz, 1995, ¶ 17).

In three studies of whole-school learning, Leithwood observed that teachers are willing to "take risks in attempting new practices" when school cultures are "collaborative and collegial" (Leithwood, Jantzi, & Steinback, 2003, p. 182). Incorporating a collaborative philosophy, teachers become empowered to recognize and address school problems (Datnow & Stringfield, 2000).

At the core of transformational leadership lies the ability to be a social architect to align one's followers with a shared vision. For instance, Murphy and Lewis's (1994) study of teachers' commitment to positive change found that important factors a transformational leader should address are the vision and teamwork of the staff, or increasing "consensus-building practices [among] school leaders" (p. 92). Northouse (2004) also viewed transformational leadership as the ability to align others with a shared vision, stating, "transformational leadership helps followers transcend their own self-interest for the good of the group or organization" (p. 177).

Like Northouse, Gantz (2006) viewed transformational leaders as "change agents or facilitators of change in order to actualize their vision for the school" (p. 82). Here, Dr. Painter and Dr. Valentine (1999), educational researchers and co-creators of the Instructional Practices Inventory, stressed the importance of teachers being included from inception and throughout the change process, asserting "the success of change initiatives lies in the meaningful involvement of teachers. If teachers are invited and even expected to be part of decision-making processes, they are more likely to be committed to successful implementation" (p. 3). In the educational approach being studied for this research project, Dr. Valentine's IPI tool, the principals and teachers are encouraged to work together to establish a culture of collaboration, maintaining a voice in the educational process. The transformational principal works to spearhead the educational vision by aligning followers to work together; the effective teacher works with students to help bring the collective vision to fruition.

Teacher Efficacy

As far back as Socrates, the importance of an effective teacher, one who can ignite wonder, has been an understood tenet based on anecdotal lore. In President George W. Bush's first State of the Union speech in 2001, he said, "a good education starts with a good teacher" (Archives, 2002, ¶ 1). A year later, in a radio address to the nation, Bush reiterated the importance of good teachers, stating, "effectiveness of all education reform eventually comes down to a good teacher in the classroom. The importance of an effective teacher has also been substantiated through research and analyzed data. A good teacher can literally make a lifelong difference" (¶ 2).

Jennings and Caulfield (2005) agreed, seeing the teacher as "the magical catalyst who incites learning and ignites passion for learning" (p. 15). Dufour and Eaker (1992) reiterated the importance of having effective educators in the classroom:

> Education reform has tended to deal with the peripheral issues of schooling. New curriculum materials, alternate scheduling arrangements, different school-wide grading scales, changes in graduation requirements, or longer school days are heralded as examples of school improvement. However, genuine school improvement is not new programs and packages. Procedures and materials do not bring about change—people do. (p. 11)

People who are strong leaders and effective teachers can create the good procedures and materials for school improvement.

Stronge (2002) stated that "teacher expertise as defined by experience (as well as education and scores on licensing exams) accounts for as much as 40 percent of the variation in students' achievement" (p. 10). Fullan's research concurred, finding that students fortunate enough to have good teachers for three consecutive years "showed a

significant increase in their percentile rankings on state examination—regardless of socioeconomic factors" (2007, p. 153). When considering "what constitutes an effective school," Marzano (2007) claimed that the "one factor that surfaces as the single most influential component of an effective school is the individual teachers within that school" (p. 1).

In a study by Nye et al. (2004), the data "support the idea that there are substantial differences among teachers in the ability to produce achievement gains in their students" (p. 253). The data from this study, based on student achievement gains, suggested:

> The difference in achievement gains between having a 25th percentile teacher (a not so effective teacher) and a 75th percentile teacher (an effective teacher) is over one third of a standard deviation (0.35) in reading and almost half a standard deviation (0.48) in mathematics. Similarly, the difference in achievement gains between having a 50th percentile teacher (an average teacher) and a 90th percentile teacher (a very effective teacher) is about one third of a standard deviation (0.33) in reading and somewhat smaller than half a standard deviation (0.46) in mathematics. (p. 253)

Nye et al. advised some caution when interpreting the results of the study, because the effective teacher was determined by achievement test scores. The researchers speculated that the results could be "compromised if teacher effects were cumulative and some of those effects were unobserved at the end of the year" (p. 254).

Sanders and Rivers (1996) studied "cumulative" teacher effectiveness at the University of Tennessee Value-Added and Assessment Center (TVAAS), compiling a longitudinal database to determine the "individual teacher's effectiveness on the rate of

academic growth" for students of diverse populations (p. 3). Sanders and Rivers (1996) studied student growth and teacher effectiveness, with particular emphasis on "teacher sequence," or the succession of teachers, effective or ineffective, that an individual student is assigned to have (p. 2). Based on this data, they found that "differences in student achievement of 50 percentile points were observed as a result of teacher sequence after only three years. The effects of teachers on student achievement are both additive and cumulative" (p. 2). In another longitudinal study from TVAAS, Wright, Horn, and Sanders (1997) studied over 100,000 students; these researchers concurred that "the most important factor affecting student learning is the teacher" (p. 63). Since most students change teachers on a yearly basis, teacher sequence is critically important in the education of a child.

Assorted variables become critical characteristics in the make-up of an effective teacher. Possibly the most difficult to quantify is the ability to establish a caring environment that also provides for stimulating learning (Fullan, 2007). Fullan stated that, "The main problem with disengaged students is that they lack a meaningful personal connection with teachers and others in the school; in other words, they lack the motivational capacity to become engaged in learning" (pp. 171–172).

With research indicating a need for teacher efficacy, it is only logical that the standards movement that is currently sweeping across the nation's schools would also extend to the classroom teacher. The National Board for Professional Teaching Standards (NBPTS) is receiving "considerable credit for stimulating work on the development of teaching standards" (Leithwood, Edge, & Jantzi, 1999, p. 45). NBPTS was created in 1987 as a direct result of recommendations from the Carnegie Task Force on Teaching,

which hoped to create a standard that would measure, acknowledge, and reinforce those teachers with proven efficacy (Hakel et al., 2008, p. 1). From the inception of the National Board in 1993 until 2007, "99,300 teachers have attempted to earn [National Board] certification, and 63,800 have been successful" (p. 250). While the original intent of the National Board founders was to identify the top 10% of the teaching profession, National Board certification numbers have lagged behind the original expectation. Many teachers complained that the certification process was time consuming, costly and strenuous. As of 2007, National Board teachers, while growing, account for "approximately three percent of the 3.1 million NBPTS-eligible teachers in the country" (p. 250). However, at KMS, 12% of the educators are National Board Certified. While the methods for identifying effective teachers are subjective, a recent congressionally mandated report from the National Research Council applied achievement data to the problem and found that the "evidence is clear that National Board Certification distinguishes more effective teachers from less effective teachers with respect to student achievement" (p. 175).

At the core of this certification are five propositions that create a foundation for National Board and effective teachers:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities. (NBPTS, 2008, ¶ 2)

National Board continues to receive affirmation from educational and political leaders. At the 2007 Johnson Foundation Wingspread Conference for Educators, Linda Darling-Hammond, professor of education at Stanford University, affirmed the importance of National Board Certification, stating, "Education is where medicine was in 1910—on the verge of creating a profession of teaching. The National Board's work has been critical in developing standards and embedding them in the practice of teaching" (NBPTS, 2008, ¶ 5).

U.S. Secretary of Education Arne Duncan echoed Darling-Hammond's sentiment during his Senate confirmation hearing on January 13, 2009:

> Over the past seven-and-a-half years, I've been the CEO of Chicago Public Schools (CPS). . . . We've tried to do everything we can to enhance the teaching profession. We've gone from 11 National Board Certified Teachers to (nearly) 1,200. We've tried to make Chicago the Mecca for people who are passionate about public education and want to make a difference in students' lives. (NBPTS, 2008, ¶ 2).

But does National Board Certification translate into raised achievement scores? Congress, in an effort to quantify the effects of National Board Teachers in the classroom, asked the National Research Council, with support from the U.S. Department of Education, to determine the impact of National Board Certified Teachers. After a seven-year review of existing data in states with the highest percentage of National Board Teachers, findings showed that students taught by National Board Certified Teachers had higher achievement test gains than students taught by non–National Board Certified Teachers (Hakel et al., 2008):

> The students of board-certified teachers performed better than students taught by non-board-certified teachers (the magnitude of the differences is on the order of 0.02 to 0.08 of a standard deviation). The studies demonstrate that board certification is a signal that teachers with this credential are more effective than other teachers at raising their students' test scores. (p. 254)

The study cautioned that more research is needed to establish a direct correlation between student assessment and National Board Certification. However, the researchers saw a strong correlation between the two and stressed the positive skills needed to achieve certification:

> Skills that the national board requires teachers to demonstrate are not reflected by what is evaluated on standardized achievement tests. For example, to become board certified in the middle childhood generalist area, teachers need to demonstrate that they can establish a caring and stimulating learning environment, that they respect individual differences, that they use a rich and varied collection of materials in their teaching, that they provide multiple paths to learning, and that they provide students with situations when they can apply what they have learned. (Hakel et al., 2008, p. 157)

The process of National Board Certification strives to identify effective educators. However, the percentage of National Board teachers is small; the need for effective teachers is large. In a three-year longitudinal study that involved classroom observations, Johnson, Kahle, and Fargo (2007) found that "effective teaching increases student achievement and closes achievement gaps for all students" (p. 371). In that study, students with effective teachers "scored significantly higher" than students with

"ineffective or neutral" teachers (p. 381). In that study, "exemplary instruction" was defined as instruction that "engages students and enhances their ability" (p. 372).

Student-Engaged Learning

My action research focused on increasing student-engaged learning experiences. I reviewed current research to increase my knowledge about student-engaged learning, and included this topic in my literature review. In the NMSA's position paper, *This We Believe*, educators are directed to become more effective by helping students to "engage in active learning" (Lipsitz, 2003, p. 2) with "continuous, authentic and appropriate assessment" to provide "evidence about every student's learning progress" (Lipsitz, 2003, n. p.). While engaged learning is applicable in all content areas, two curricula areas, history and science, have emphasized the need for engaged learning in their national forums. In 1996, the National Center for History in the Schools set standards to engage students in grades 5 to 12 in learning by "involv[ing] higher order thinking in addition to the acquisition of historical facts and concepts" (Bulgren, Deshler, & Lenz, 2007, p. 122). The National Science Education Standards (National Research Council, 1996) stress the importance of problem-based learning, or engaging students to discover, analyze and synthesize. The standards stress that science is "something that students do, not something that is done to them" (p. 2). Niederber (2009) observed that "scientific knowledge is much more than rote memorization; it is the ability to understand scientific phenomena in context" (p. 32).

What is engaged learning? Fullon (2007) defined student-engaged learning by blending Webster Dictionary's definition with his interpretation: "to engage [is] 'to attract and hold through interest,' 'to cause to participate,' 'to connect or interlock with.'

In short, are schools interesting, engaging places to be? The bad news is that by and large, they are not" (p. 174). Marzano (2007) further emphasized the need for engaged learning, stating that "keeping students engaged is one of the most important considerations for the classroom teacher" (p. 98).

Over the last several decades, researchers have used a variety of names for student engagement, including "time on task" and "participation" (Marzano, 2007, p. 99). Newmann and Wehlage (1995) defined student engagement in school as "the student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote" (p. 12).

Fredricks, Blumenfeld, and Paris (2004) viewed student engagement as a complex process that can be divided into three basic categories—behavioral, emotional and cognitive—with significant overlap among the three areas. They discuss the three categories of student engagement as a "meta construct" involving multiple levels of engagement:

1. Behavioral engagement draws on the idea of participation; it includes involvement in academic and social or extracurricular activities and is considered crucial for achieving positive academic outcomes and preventing dropping out.
2. Emotional engagement encompasses positive and negative reactions to teachers, classmates, academics, and school and is presumed to create ties to an institution and influence willingness to do the work.

3. Finally, cognitive engagement draws on the idea of investment; it incorporates thoughtfulness and willingness to exert the effort necessary to comprehend complex ideas and master difficult skills. (p. 60)

Most researchers agree that student-engaged learning is an essential tool in the toolbox of the effective 21st century educator. But how does student engagement correlate to learning in the classroom?

Akey (2006) asserted, "Students learn more and retain more information when they actively participate in the learning process and when they can relate to what is being taught" (p. 1). Affirming the relevance for effective teachers, Akey's research revealed that effective teachers are "key players in fostering student engagement" (p. 1), with engagement being a "critical element in student success and learning. Researchers agree that engaged students learn more, retain more, and enjoy learning activities more than students who are not engaged" (p. 3). Klem and Connell (2004) found middle school student engagement correlated directly to academic performance, with highly engaged students "more than 75% more likely to do well on the performance and attendance index and 23% less likely to do poorly than students who weren't rated as highly engaged" (p. 22).

The effective teacher encourages students to engage higher-order thinking skills by creating lessons that direct students to analyze, evaluate, synthesize, or create. Motivation and student-engaged learning are two factors linked to students utilizing higher-order thinking skills (Kamil, 2003). The effective teacher also encourages student-engaged learning by setting the tone of the classroom as one of inclusion, creating an atmosphere conducive to learning. Robert Sylwester's (2000) research analyzing the

brain function of young adolescents suggested that students are more likely to engage in learning when the student is in a safe and positive learning environment.

Student-engaged learning thrives in an atmosphere where students feel that the material being studied is relevant to their lives. Fullan (2007) explained:

> The new common ground for both cognitive scientists and sociologists concerns motivation and relationships, that is, it is only when schooling operates in a way that connects students relationally in a relevant, engaging, and worthwhile experience, that substantial learning will occur. (p. 171)

Worthy, Moorman, and Turner (1999) concurred that middle school students tend to engage in a "deeper level of processing" when reading material that connects to their interests (p. 15).

Higher-Order Thinking Skills

Over the past two decades, education reform has undergone a paradigm shift, from students merely memorizing material to students synthesizing their learning through higher-order thinking skills (Newmann, 1990). The U.S. Department of Education attributed this transformational shift of focus to "assessments that indicate that although U.S. students perform adequately on tests of basic skills, they perform comparatively poorly on tasks that involve problem solving, critical analysis, and flexible understanding of subject matter" (Raudenbush & Bryk, 2002, p. 524). The current focus in education is the importance of creating lessons that help students with problem solving and analysis—the use of higher-order thinking skills.

Half a century ago, educational psychologist Benjamin Bloom addressed educators' need to engage students to use higher-order thinking skills by creating a tool

for learning, the Taxonomy of Educational Objectives, now known as Bloom's taxonomy. Educational domains were seen as hierarchical; higher-order thinking skills were based on acquiring a foundation of knowledge and skills before proceeding to the next level of learning. Bloom's six categories for his taxonomy are knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom, 1956). The premise behind the taxonomy was that students first needed to learn the subject material, then understand it, and finally master it. However, too frequently, children do not progress beyond the initial stages of knowledge—rote memorization of material.

In the 21st century, some educators have attempted to adapt Bloom's work to today's classrooms. When reviewing the original taxonomy, Tankersley (2005) stated, "We must expect students to operate routinely at the higher levels of thinking" (p. 148). Tankersley continued, "Learning to synthesize, evaluate, and process information in new ways is the key to preparing students for the world outside of school" (p. 164). Tankersley further emphasized the need for teachers to use higher-order, deeper thinking with their students, stating, "teachers must learn to model their thinking processes and make the invisible visible to students . . . [by] the tightening of the higher-order thinking thread" (p. 164).

Marzano (2000) addressed adapting Bloom's taxonomy to align with standards-based curriculum in "A New Taxomony of Educational Objectives." In his research, Marzano emphasized the cognitive process of learners, using data from his 1998 meta-analysis of over 2,500 instructional strategies.

In an effort to reflect recent research in learning theories, a former student of Bloom, Lorin Anderson, worked with colleagues to revise the taxonomy to reflect the

language of 21st century educators. Anderson and Krathwohl (2001) wove state and federal frameworks, as well as new learning strategies, into their adaptation of the terms used in the taxonomy. In their revision, Bloom's nouns have been changed to active verbs on an ascending staircase. Both Anderson's and Marzano's adaptations of Bloom's taxonomy address the issue that students in the 21st century are being asked to move beyond simply remembering or understanding by engaging in higher-order, deeper thinking.

Bulgren and colleagues (2007) defined higher-order thinking as a "manipulation of information, such as categorizing, comparing and contrasting, determining, causes and effects, weighing options, explaining 'big ideas' in a subject, and inquiring into and answering critical questions; the generalization of ideas to solve problems using inference or prediction" (p. 121). Bulgren et al. continued, expanding their definition of higher-order thinking to include the "construction of new perspectives and understandings" (p. 121). These authors further emphasized the demands on 21st century students to be able to engage in deeper levels of thinking, predicting that when these students near adulthood, "they are expected not only to know—or have the skills to acquire—critical facts and concepts in subject matter classes, but also to use those facts, concepts, and prior knowledge in ways that require higher order thinking" (p. 121).

In the 21st century, when data are often used to drive decisions, educators have access to a variety of studies that affirm the positive benefits of student engagement using higher-order thinking skills. One such study involved 16 schools in California and Michigan, where Raudenbush and Bryk's (2002) research "revealed powerful effects" of higher-order thinking objectives "in all disciplines—especially math and science" (p.

523). The study revealed the importance of effective teachers and presented data that demonstrated that higher-order thinking was appropriate for all tracks, ranging from low to gifted.

Modern education addresses not only what students know but how they think. Cotton (1991) contended, "There is yet another major force behind the call for improved thinking skills instruction. Educators are now generally agreed that it is in fact possible to increase students' creative and critical thinking capacities through instruction and practice" (p. 2). The ability to reflect, synthesize, and analyze have become part of the 21st century classroom.

Assessment

Does student-engaged learning affect achievement scores? In a multi-nation study, Irwin et al. (2002) found that "more highly engaged students (9, 11 and 17 year olds) showed higher achievement scores in reading than less engaged students" (p. 102). As teachers strive to motivate students to engage in learning and utilize higher-order thinking skills, the educator must reflect on instructional activities that will challenge students.

How do teachers craft lessons to incorporate student-engaged learning on one hand, while trying to create valid assessments on the other? Stiggins (1997) believed that the answer to this question is not to view teaching and assessment as separate entities, but instead to weave assessments into the curriculum as a powerful learning tool. Burke (2005) viewed assessments as "valuable teaching tools that should be used to promote meaningful learning for all students" (p. 11).

In an effort to utilize high-quality assessments, educators are turning to authentic assessments for measurement. Authentic assessment utilized "a wide variety of strategies such as open-ended questions, exhibits, demonstrations and hands-on execution of experiments" to help students better achieve "significant outcomes" when learning is measured (Jones & Mulvenon, 2003, p. 13).

Researchers from the Center on Organization and Restructuring (CORS) at University of Wisconsin analyzed data from over 1,000 public schools; the study concluded that authentic pedagogy and assessment contributed to student learning. However, the researchers went on to say that practicing school-wide assessment was difficult without a "shared purpose for student learning, collaborative activity to achieve the purpose, and collective responsibility among teachers and students for student learning" (Newmann & Wehlage, 1995, p. 58). When viewing assessment as part of the learning process, the assessment tool can be an integral part of the learning experience.

Collaboration

How do students join teachers to be "collectively responsible" for learning? Stiggins pointed out that "as much as one-third of [a teacher's] professional time" is spent on "assessment-related activities" (p. 24). If students become more involved in the educational process, they gain ownership for their learning by "internaliz[ing] valued achievement targets," thus improving their learning growth (p. 25). Students need a "meaningful engagement with the content," where they are able to "apply higher-order skills because they will have the need to and the interest in doing so" (Muth & Alvermann, 1999, p. 73). Therefore, educators must focus on ways to increase a student's learning growth, rather than using AYP benchmarks as the "driving force in inspiring

long-term growth. Rather, the catalyst for change should be the desire to increase the achievement and understanding of all students" (Depka, 2006, p. 13).

Recent research (Akey, 2006; Garcia-Reid, Reid, & Peterson, 2005) showed that students who are engaged in learning are more successful academically than students who are not engaged. Educators must look for meaningful ways to engage students in their learning. Akey's (2006) research connects student engagement to "collaborative, supportive environments with high but achievable standards" (p. 32).

When a faculty collaborates, Dr.Valentine (2006) stated,

> . . . teachers engage in constructive dialogue that furthers the educational vision of the school. It reflects changes in the way teachers across the school work and plan together and analyze and build an awareness of the practices and programs used by others throughout the school. (p. 7)

The National Commission on Teaching and America's Future (NCTAF), a non-partisan organization made up of educators, politicians, and business leaders, published a report entitled *No Dream Denied: A Pledge to America's Children*. The committee's views reiterated the need for faculty collaboration: "Quality teaching requires strong professional learning communities. Collegial interchange, not isolation, must become the norm for teachers" (NCTAF, 2003, p. 17).

Historically, however, the organization of schools has lent itself to teachers becoming isolationists in their classrooms. Teachers have their classrooms, their students, their bulletin boards and their lesson plans. Most teachers may decide how to teach a particular subject and what to teach on a particular day. This scenario creates a perfect storm for a profession to work independently from others. DuFour and Eaker (1998),

leading proponents of faculty collaboration, stated, “Schools have been characterized by some critics of public education as little more than independent kingdoms [classrooms] ruled by autonomous feudal lords [teachers] who are united only by a common parking lot” (p. 115). Rather than shutting out their colleagues, DuFour and Eaker encourage teachers to work together toward the shared vision that every student can learn.

Fullan (1998) emphasized the need for a faculty to collaborate toward a shared vision, stating, “There is a ceiling effect to how much we can learn if we keep to ourselves” (p. 12). Fullan stressed collaboration as a key element for learning organizations, stating, “Personal and group mastery thrive on each other in learning organizations” (p. 14). Just as teachers encourage students to work together in the classroom, educators benefit from working with peers.

While the idea of faculty collaboration seems simplistic, research indicates that otherwise. David (2008) stated, “Teacher collaboration does not occur naturally; it runs against prevailing norms of teacher isolation and individualistic approaches to teaching” (p. 87). Teachers often repeat a shared philosophy, “Just let me close my classroom door and teach.” This philosophy has a literal and metaphorical application. Until the mandates of NCLB, many teachers viewed raising standardized test scores as a problem for administrators to address. In the 21st century, education appears to be undergoing a paradigm shift, with teachers asked to “keep their doors open” to work together toward a shared vision. With the stringent testing mandates of NCLB, teachers are expected to collaborate to analyze and improve testing data for the school and the individual student. David stated that, in order to effectively collaborate, or “work together to identify common challenges, analyze relevant data, and test out instructional approaches,”

teachers must be trained in collaborative skills, such as "collecting data, making sense of the information, and figuring out its implications for actions" (p. 87).

Boko (2004) reviewed a series of teacher collaboration projects, including Quantitative Understanding: Amplifying Student Achievement and Reasoning (QUASAR) and the National Writing Project (NWP). The purpose of QUASAR was to "improve mathematical instruction for students in economically disadvantaged areas" (p. 7). Researchers studied teacher collaboration at six sites and found that the "professional learning communities were central to fostering teacher change and student learning" (p. 7). Further study revealed that teachers in the QUASAR model "increased their use of cognitively challenging tasks and students' mathematical explanations" (p. 4). At the conclusion of the study, researchers concluded that "students in the QUASAR schools grew in their ability to solve problems and communicate mathematically" (pp. 7–8).

While QUASAR research is based in the study of mathematics, other content areas encourage teacher collaboration in an effort to foster student learning. The Instructional Practices Inventory, the basis of this research study, promotes faculty collaboration and engaged learning in all content areas. The National Writing Project (NWP) is grounded in teachers and students collaborating to strengthen writing skills.

The NWP began in 1973 at University of California, Berkeley, as the Bay Area Writing Project. Since its inception, the project has become the oldest federally funded writing project in the United States; in 2003, the NWP offered 6,582 programs for over 100,000 educators (Boko, 2004, p. 7). NWP uses a "teacher-teaching-teacher" model, with colleges working with teacher leaders, who then collaborate with teachers at their

own schools. Boko found that teachers who participated in the NWP collaborative format felt the writing project "helped them to develop a valuable professional network, change their philosophies about teaching writing, and increase both the time spent on writing instruction and use of exemplary teaching practices" (p. 9). The NWP offers scholarships to teachers in all content areas, because writing is not only for English class, but occurs across all content areas.

Both the QUASAR project and the NWP encouraged teachers to collaborate and reflect in their learning experiences. Reflection is an extension of the collaboration process, where "teachers are provided a way to regularly and systematically reflect on their practice in a supportive, collegial environment free from evaluation" (Distad & Brownstein, 2004, p. 7). Teacher collaboration and reflection are parallel skills that help teachers create lessons that lend themselves to student-engaged learning. Costa and Kallick (2000) viewed collaborative reflection as a thought process that requires the faculty to engage in higher-order thinking. In their research, Costa and Kallick saw faculty collaboration as opportunity for the following:

1. Amplifying the meaning of one's work through the insights of others
2. Applying meaning beyond the situation in which it was learned
3. Making a commitment to modifications, plans, and experimentation
4. Documenting learning and providing a rich base of shared knowledge. (2000, p. 60)

Can faculty collaboration be used as a foundation to increase student-engaged learning experiences? This question motivated researchers Dr. Painter and Dr.Valentine to develop the Instructional Practices Inventory (IPI) in 1996, with Dr. Valentine refining

the process in 2002 and 2005 (Valentine, 2007a). The IPI strives to create an environment that encourages student-engaged learning, higher-order thinking skills, and faculty collaboration with reflection.

The IPI provides a "process and rubric for observing and categorizing engaged student learning and, thus, the nature of instruction across the entire school" (Sizer & Meier, 2006, p. 187). Using a rubric as part of a coding system, a trained IPI observer moves as unobtrusively as possible from class to class, observing for several minutes and systematically recording student learning. The trained observer creates a profile of the learning experiences and presents the data to the faculty; the faculty then engages in "deep, reflective conversations and planning that are essential to improve and maintain high levels of instruction/learning throughout the school" (p. 187). The IPI is a process that assesses the type of learning during a typical school day (Valentine, 2005). By collectively reviewing the data that is created by the IPI tool, faculties are led into a worthwhile, collaborative relationship. (See Chapter Four for further discussion explaining IPI.)

Summary

Chapter Two reviewed literature on (1) transformational leadership, (2) teacher efficacy, (3) higher-order thinking, (4) student-engaged learning, and (5) faculty collaboration and reflection. Each section reviewed topics related to critical areas needed to provide optimum learning experiences for students. Transformational leadership is an important component, because effective leadership is a positive force for a faculty beginning the change process to improve classroom instruction. Mrs. Douglas, the principal of KMS, provided what I view as transformational leadership as the school

learned to implement IPI strategies. Teacher efficacy, or what happens in the classroom, is one of the most important components for school-wide change. In order to fully engage students in learning, 21st century schools are shifting from requiring students to merely memorize material, to incorporating higher-order thinking skills that require synthesis, application, and creation. For faculties to work at their optimum, research suggests that teachers who are isolationists must become part of collaborative communities that work together toward the common goal that every student can learn. IPI asks teachers to reflect on their practices and collaborate as a faculty. Chapter Three describes the research methodology, participatory action research, I used to obtain data to measure school-wide student-engaged learning experiences and faculty collaboration for KMS.

Chapter Three: Methodology

> "It is the teachers who, in the end, will change the world of the school by understanding it."
>
> Lawrence Stenhouse (1926–1982)

Introduction and context

In the era of *No Child Left Behind*, when schools' standardized test scores are published in local newspapers and district scores are the subject of community discussions, educators struggle to create optimum learning environments that not only improve the students' learning, but are also reflected in standardized test scores. Statewide public education standards are established for each state, and students are tested to determine if they meet arbitrary benchmarks set by policymakers and politicians. According to the *Chicago Tribune*, "Nearly a third of all Illinois public schools failed to hit rising test targets during the 2007–2008 school year, one of the worst performances since No Child Left Behind took effect in 2002" (Malone, 2008, ¶1). Over 1,100 schools have failed to meet AYP in Illinois, and because the bar for NCLB rises yearly, future prospects for schools are bleak.

Unfortunately, teachers—the facilitators of learning in the classroom—are often left disenfranchised from the testing process. McCarthey, who studied the impact of NCLB in Illinois public schools for seven years, believed that teachers "feel straitjacketed by a high-stakes test" (as cited in Ciciora, 2008, ¶1). Illinois is not alone in reporting that teachers are struggling with NCLB's use of standardized testing. Barksdale-Ladd and Thomas (2000) interviewed 59 teachers and 20 parents in Florida and Michigan; their study revealed that "little is heard from the teachers who are responsible for students' meeting the standards and passing the tests" (p. 385). The researchers also found that "publishing test scores with schools' rankings in local

newspapers, thereby pressur[es] teachers to produce high test scores, caus[ing] teachers anxiety, shame, loss of esteem and alienation" (Barksdale-Ladd & Thomas, 2000, p. 385).

One frustration teachers experience concerning standardized tests is that the material chosen for those tests is arbitrary. Koretz (2002) gave credence to this concern, asking if students should be tested on what is taught in the classroom or what policymakers think should have been taught in a classroom. He described the testing dilemma of "one-size-fits-all" assessments that are not working as intended.

> The drive for greater educational accountability continues to gain momentum, and student testing continues to gain importance. The consequences attached to performance on tests continue to grow. Yet we have growing evidence that test-based accountability policies are not working as intended, and we have no adequate research-based alternative to offer to the policy community. In this situation, the role of researchers is like that of the proverbial custodian walking behind the elephant with a broom. The policies are implemented, and after the fact a few researchers are allowed to examine the effects and offer yet more bad news. (p. 24)

While Koretz pointed out that standardized testing is not "working as intended," he also conceded that schools do not have an "adequate research based alternative" (p. 24). In the current educational climate, standardized tests have become the linchpin for NCLB. As researcher, I felt pulled one way to address student learning and pulled another way to include standardized tests. It was this pull that led me to choose using the IPI for this participatory action research study. As researcher, I will collect data for student learning

experiences using the IPI protocols. Then, I will create charts that "provid[e] a valid picture of learning across a school or school system" (Valentine, 2007a, p. 3). Because NCLB requires the use of the ISATS, I will use this standardized test as an assessment tool, along with the NWEA MAP tests and school learning profiles created by the IPI.

Action Research

Action research, my chosen method of inquiry, has been defined as "a collaborative activity among colleagues searching for solutions to everyday, real problems experienced in schools [while] looking for ways to improve instruction and increase student achievement" (Ferrance, 2000, ¶ 2). In this study, I used participatory action research (PAR), because this method of inquiry allowed the researcher to participate in the research while facilitating the study. Herr and Anderson (2005) stated that "perhaps the most important feature [of action research] is that it shifts its locus of control in varying degrees from professional or academic researchers to those who have been traditionally called the subject of research" (p. 2).

Because the action researcher seeks solutions that pertain to a particular school or setting, the procedures are more of an emergent journey than a linear process. Holly, Arthar, and Kasten (2009) likened action research in education to "traveling the yellow brick road," (p. 3), with a journey of transformation providing opportunities for 21st century educators to "collaborate with others to enhance the power of our learning" (p. iii). Herr and Anderson define action research as "inquiry that is done *by* or *with* insiders to an organization or community, but never *to* or *on* them" (p. 4). McCutcheon and Jung (1990) stated that "action research defies easy description [because of] methodological variations in a number of countries" (p. 144). However, most action researchers agree

that one important feature of action research is the use of collaboration:

> Action research is characterized as systematic inquiry that is collective, collaborative, self-reflective, critical, and undertaken by the participants of the inquiry. The goals of such research are the understanding of practice and the articulation of a rationale or philosophy of practice in order to improve practice. (McCutcheon & Jung, 1990, p. 148)

Action research, also known as collaborative research, can be traced back to John Dewey (1938) who said educators should be involved in the "acquisition of what is already incorporated in the heads of elders" (p. 19). Working with and learning from experienced teachers was a foundation of Dewey's educational philosophy. Tashakkor and Teddlie (2003) interpreted the writings of Dewey (1938) as promoting "teacher-researcher partnerships because they proved to be a useful tool in helping teachers to think about and conduct their practice" (p. 654). In 1944, according to researchers McFarland and Stansell (1993), Lewin (1944) was credited with creating the term action research for the purpose of describing "work that did not separate the investigation from the action needed to solve the problem" (p. 14). In 1946, Lewin described his approach to research as a "spiral of steps" with a "circle of planning, action and fact finding" (1991, p. 220). Lewin's approach has been described by Noffke and Stevenson (1995) as cyclical, using a "non-linear pattern of planning, acting, observing, and reflecting on the changes in the social situations" (p. 2). Blichfeldt and Anderson (2006) said Lewin "sought to develop theories appropriate for real world problem solving. Lewin emphasized change and investigation of change as key contributions of action research" (p. 2).

In the 1950s, Stephen Corey and his colleagues at Columbia University used the research method of social psychologist Lewin for educational action research (Schmuck, 2009). In the 1960s, with the evolution of action research, some researchers questioned "the applicability of scientific research designs and methodologies as a means to solve educational issues" (Ferrance, 2000, p. 8). Rather than creating specific hypotheses, most educators approached action research as a way to resolve general problems in education. However, this concern became the lure that inspired educators to embrace educational action research. By studying a problem in the classroom, the teacher-researcher studied an issue that directly impacted the teacher's classroom.

During the 1960s and 1970s, before education had adopted this methodology, interest in action research diminished. However, in 1975, British researcher Lawrence Stenhouse published *An Introduction to Curriculum Research and Development,* in which he discussed "the teacher as researcher" (Holly, Arhar, & Kasten, 2009, p. 11). Stenhouse said, "It is teachers who, in the end, will change the world of education by understanding it" (Holly et al., p. 13). Stenhouse's work has been credited with helping to revive action research in Britain. During the 1970s and 1980s, "action research in Britain saw a teacher research movement develop in the schools as well as in a series of large, state-funded collaborative action research projects" (Herr & Anderson, 2005, p. 20).

Action research is a method of inquiry that has historical roots across the globe, first starting in the United States with Lewin and Corey and then moving to England and Australia. In Schmuck's collection of articles about action research, Zeichner (2009) discussed the history of educators using action research.

> . . . there is the contemporary teacher researcher movement in North America that has been developed since the 1980s primarily by teachers, often with the support of their university colleagues and subject matter associations. Finally, there is the recent growth of self-study research by college and university educators who inquire into their own practice as teachers and teacher educators. (p. 25)

In the 1990s and the early 21st century, action research became a tool used by teachers and educational leaders in the United States. One reason for the educational movement toward action research, according to Best and Kahn (1993), is that action research is "focused on immediate application," rather than the "development of theory" (p. 24). In his book, *Action Research: Teachers as Researchers in the Classroom,* Mertler (2009) said, "Numerous authors and researchers have proposed models for the action research process. Because this process is somewhat dynamic, various models look a bit different from one another but possess numerous common elements" (p. 13). The common elements that Mertler has observed in his study of action research in education include "observing or monitoring of current practice, followed by the collection and synthesis of information and data" (p. 13). After this process, "some sort of action is taken, which then serves as the basis for the next stage of action research" (p. 13).

Calhoun (1994) gave a simplified definition of the action research process, stating, "Action research is a fancy way of saying, 'Let's study what's happening at our school and decide how to make it a better place' " (p. 20). Calhoun described the process as "cyclic," with the "results of on-site data [used] to determine what actions we will take to achieve commonly valued goals" (p. 2). The IPI process followed Calhoun's common-sense, cyclic approach to action research. The IPI researcher was often a teacher at the

school who gathered and presented data. The faculty analyzed the IPI data and looked for ways to improve the classroom experience.

Herr and Anderson (2005) stated that "a cycle of activities forms an action research spiral in which each cycle increases the researchers' knowledge of the original question, puzzle, or problem" (p. 5). In this study, the IPI process created a "research spiral" that increased my knowledge of engaged learning. More importantly, the process increased the faculty's ability to create a culture of collaboration that fostered improved learning experiences for the students.

Action research is not only an effective research tool, but it is also seen as a transformational approach to improving the organization that is being studied (Grogan, Donaldson, & Simmons, 2007). Grogan and colleagues, in an article supporting the use of action research studies for dissertations, stated, "Transformative leadership requires democratic collaboration and an understanding of what it means to lead collaboratively and relationally rather than authoritatively" (2007, ¶ 30). Action research lent itself to this IPI study because the KMS principal provided transformational leadership, working collectively with the school faculty. When considering what Herr and Anderson call the "positionality" of the researcher (2005, pp. 30–31), I was an insider (a teacher within the district) who collaborated with other insiders (other educators within the district). This positionality was important, because my placement influenced ethical issues and methodology in the study. In this case, I served as both facilitator and researcher, collaborating and recording the conversations of others during those collaborative times.

Questions Addressed in This Study

In this participatory action research study, I collaborated with the faculty to

generate new knowledge to engage students in learning. The research was action oriented, with the researcher observing and interacting with the students and faculty as they experienced the IPI. The researcher and participants sought to increase engaged learning and improve standardized test scores—both relevant to KMS.

This study considered these general problems: Can student-engaged learning be measured? When teachers collaborate to create lessons that engage students in higher-level thinking, does the faculty's use of reflective practices and problem solving create an evolution of their teaching practices? Will the faculty's reflective collaboration create a progressive instructional change that will have an impact on school improvement?

In order to address these questions, I used the IPI process developed by University of Missouri Professor Jerry Valentine. The IPI's six-category process for coding engagement and learning provided a series of snapshots of student engagement across the entire school for a specified period of time, typically a school day. Over the course of the two-year study and six focused walks (see chapter four), I created graphs to illustrate the types of learning experiences occurring at random moments during the six school days. Using the IPI data profiles, the faculty collaboratively studied their data and determined strategies to increase student-engaged learning experiences. To study the relationships between the use of the IPI data collection and faculty study of the data, I also analyzed state student achievement data, including the students' ISAT and MAP scores.

The Purpose of the IPI

The purpose of this action research study was to determine if there was a relationship between faculty collaboration and student-engaged learning using the IPI. In addition, I hoped to find a positive relationship between student achievement scores and

the implementation of the IPI. The IPI process has been studied extensively and shown to be effective in improving student achievement in Missouri. However, the IPI has not been extensively studied for Illinois schools, which use ISAT, Illinois's standardized achievement test for NCLB.

In 2007, one special education subgroup at KMS did not make AYP. Schools that do not make AYP two years in a row face serious repercussions, in accordance with demands in place from NCLB:

> Once a school fails to make AYP for two consecutive years, it goes on Title I School Improvement. In the first year of Title I School Improvement, the school must offer choice. In the second year of School Improvement, the school must provide supplemental services. If a school fails to make AYP for a third year (second year on School Improvement), students from low-income families in the school must be given the option to use Title I funds to obtain Supplemental Services selected from a list of state-approved providers. (ISBE, 2009a, ¶ 1)

The principal and faculty were collectively concerned about making AYP the second year. The administration hoped that implementing the IPI process at the middle school would encourage faculty collaboration, increase the number of student-engaged learning experiences, and increase standardized achievement test scores. With that in mind, I chose an action research study of KMS, using participatory action research to study the faculty's implementation of the IPI strategies.

Research Questions

This study addressed the following research questions:

1. Do IPI observational data foster individual and whole faculty teacher reflection

and problem solving?

2. Do teacher reflection and problem solving, while using the IPI process, foster instructional change that leads to increases in student-engaged learning and deeper higher-order thinking?
3. If there are instructional changes, are there relationships among those changes that can be linked to the IPI process and student achievement?

Participants

The participants in this participatory action research study spanned two academic years and included all seventh and eighth graders, approximately 500 students each year, and 32 certificated staff. KMS is located in a rural community just outside a major metropolitan area. The IPI profile data were collected during the 2007–2008 and 2008–2009 school years. This represented engagement in learning for eighth graders in the high school graduating class of 2012 and seventh graders in the high school graduating class of 2014. Students from these classes experienced the IPI for one year. Students from the graduating class of 2013 experienced the IPI for two years, as seventh and eighth graders. ISAT and MAP tests for the class of 2013 were analyzed because those were the only students who experienced the IPI process for two consecutive years, giving them a foundation in the IPI. Students from the classes of 2012 and 2014 were in school for only one year of the IPI process and thus their achievement data were not part of this study.

Using the IPI, my plan was to study data that were collected during six focused walks over the course of two academic years. These data were compiled and presented to the faculty for their reflection and discussion. In addition, scores from MAP testing and ISAT testing were tracked and reviewed to see if the use of the IPI was reflected in

student test scores. After each of the six focused walks, it was my intent to create a profile of student learning experiences. These data were presented to the faculty. During the teacher meetings, field notes of the faculty discussion were collected. In addition, teachers were asked to record their reflective observations on a data analysis worksheet (Appendix A) provided by the researcher. Materials used and produced from these collaborative work sessions were used in the study.

Procedures

Engagement data were collected using the IPI data collection process. The IPI observations and the faculty study of the IPI profiles provided both quantitative and qualitative data for this study. Data collected from the ISAT scores and MAP scores provided additional quantitative data for analysis. Faculty worksheets from collaborative meetings provided additional qualitative data.

The following procedures were used for this study:

1. Baseline IPI data were collected in the first focused walk. The data collection process followed the recommended guidelines for the IPI process (Valentine, 2005). Each observation included at least 100 classroom engagement observations ranging from 30 seconds to several minutes in duration, dependent on the necessary time to accurately assess the engagement per the IPI categories.
2. For every focused walk, line graphs and pie charts depicting the data for each of the six IPI categories were developed for faculty study.
3. After each focused walk, the profile data were presented to the faculty. I am also a teacher from the district trained in the use of the IPI process, so I facilitated the faculty's collaborative study of the data. The faculty analyzed the data and

problem solved ways to improve the students' learning, with the goal of continuously increasing these higher-order learning experiences. During the second year, the faculty more aggressively studied the data for IPI categories five (student higher-order, deeper learning conversations) and six (student-engaged active learning in all other forms of higher-order, deeper thinking). I processed the faculty's learning experiences with the IPI data in both whole-faculty discussions and small-group discussions.

4. At the conclusion of the IPI data collection and study process, I analyzed the relationships between the IPI data and the faculty's study of the data with the ISAT and the NWEA MAP.

The preliminary results of the IPI data and my observations of the use of the IPI process in the school were shared with the school faculty and district policymakers at the close of the 2008–2009 school year. As a result, the faculty chose to continue their use of the process and, at the time of this writing, the district policymakers were considering implementation of the IPI process in the other schools across the district.

Preview of Chapters Four and Five

A chronological discussion of the first year of the study (Phase One), including the first year of the IPI data and the faculty study of the data, is presented in Chapter Four. Chapter Five includes the IPI data and subsequent faculty study during Phase Two, the second year of focused walks. Chapter Five also includes the study of the ISAT and MAP scores and other interventions present in KMS during the course of this study. Qualitative data will also be presented from my summaries of meetings with KMS teachers and administrators. Chapter Six includes themes identified from the study,

conclusions made based on the data of the study, recommendations for other researchers interested in studying the IPI process, and strategies for school improvement through the use of formative data and collaborative conversation.

Chapter Four: Phase One of the IPI

"Education is a social process; education is growth; education is not a preparation for life but is life itself." John Dewey (1859-1952)

Context for the Study

Action research provides the potential for educators to search for "solutions to everyday, real problems experienced in schools" (Ferrance, 2000, p. 6). With that in mind, I began a dialogue with Mrs. Douglas, the principal of KMS, a transformational principal who had collaborated with her faculty to create a vision statement: "Doing What's Best for Kids."

The principal and I were both NBCTs and enjoyed discussing possible ways to improve the classroom experience for students. As NBCTs, we had the opportunity, at no expense to our district, to attend educational workshops through Systems-wide Transition Toward Accessible Certified Educators (STANCE), funded through a grant for Illinois National Board Professional Preparation and Support System. Our shared commitment to education led us to attend several educational workshops together. One workshop, on October 24, 2007, became the impetus for this study.

Mrs. Douglas and I traveled to a suburb of Chicago, a six-hour drive from our southern Illinois community, and participated in Dr. Valentine's workshop for his Instructional Practices Inventory. This innovative approach to school improvement encouraged educators to engage students in learning activities that used higher-order thinking skills. IPI was an instructional process designed by Valentine and Painter in 1995 and revised in 2002, 2005, and 2007 by Valentine (Valentine, 2007a). We listened to Dr. Valentine's rationale for IPI, read the data supporting his program, and

observed him as he demonstrated the process. We took and passed a proficiency test to use the IPI process in our schools.

On the drive home, we brainstormed ways to use the IPI process for KMS. I enrolled in a doctoral program and was looking for a subject for my dissertation. Mrs. Douglas expressed concern that one special education subgroup at KMS had not met AYP for NCLB. Illinois state law (PA 93-0470) stipulates consequences, including school choice, restructuring, and corrective action, for "all schools that fail to meet AYP criteria for consecutive years" (Illinois State Board of Education, 2009b, ¶ 6). Mrs. Douglas, the curriculum leader for the school, and I discussed ways to improve learning, not just for KMS's failing subgroup but for all students. I was drawn to working on a project that would be a learning experience for me, as well as a useful pursuit for students and teachers in my district. I did not realize that I had already started the action research study by "identifying a problem" (Ferrance, 2000, p. 9).

The Action Research Study Using the IPI

I decided to bring the IPI process to KMS. This research study was implemented over two years. Each year is discussed in separate phases: the first academic year is presented as Phase One in Chapter Four and the second academic year is presented as Phase Two in Chapter Five. IPI strategies were implemented through a series of structured focused walks that occurred over two academic years.

Phase One focused walks occurred on December 12, 2007; February 21, 2008; and April 28, 2008. Phase Two focused walks took place on October 16, 2008; January 29, 2009; and March 29, 2009. Phase One was the first academic year, beginning in October 2007, when the problem was first identified. While action

research tends to be circular and recursive, the story of this narrative is moving forward in chronological order to better convey the process.

The Approval for the Action Research Study

During the October IPI workshop, I received training for the IPI process. As part of that training, I completed a pencil and paper test where, using the IPI rubric, I assigned a numeric code to a series of classroom scenarios. The purpose of the testing is for the purpose of reliability when coding (Valentine, 2007a):

> When a person asks for permission to use the IPI as a data collection instrument, he/she is expected to participate in a Observer Reliability Workshop session designed to develop skills to accurately document student-engaged learning using the IPI observer coding categories and data collection protocols. Persons requesting to use the instrument are expected to complete this full-day IPI Observer Reliability Workshop and score .80 or higher on the post-training assessment. A reliability rating of .80 is recommended for purposes of collecting school improvement data and .90 or higher for the purposes of collecting data for research. (p. 3)

Educators taking the assessment test received the results of the test in the mail. Both Mrs. Douglas and I received a 95% on the assessment test. Dr. Valentine granted me permission to use the IPI process for my research study. With Mrs. Douglas also receiving a high score, I knew I could use her as resource if I ran into coding dilemmas.

After I received permission to use the IPI, I contacted then-superintendent Mr. Patrick (a pseudonym) and discussed the merits of the IPI. He endorsed and supported

the use of the IPI at KMS for the purpose of my dissertation (see Appendix B). Next, I contacted Mrs. Fernandez (a pseudonym), an officer in the district teachers' union. She was also a teacher–leader at KMS. First, I ensured her that the observations in the study would not be used in any way to evaluate teachers. Second, no names or identifying factors would be used for individual participants in the study. Third, if the study produced promising results, I hoped that the research project would be beneficial to the school community, serving as a catalyst for other schools that chose to implement the IPI process. Mrs. Fernandez, also a NBCT, was interested and supportive; she contacted other union officers, who also endorsed and supported the study (see Appendix C).

Next, I needed to get permission from the KMS faculty to determine how to have them participate in my study. As a novice in research, I did not realize how critical the teachers' buy-in to the IPI would be for my action research study. However, as a student of Marzano's and DuFour's literature, I intended to work with the teachers to establish a culture of collaboration toward the IPI process. Innately, I understood that the degree to which the staff bought into the process would be directly proportionate to the degree of success for my study.

Mrs. Douglas, who had also been through the IPI training, was interested in being part of the research process, so we met before the faculty meeting to discuss the agenda. At KMS's regularly scheduled faculty meeting the first week of November 2007, I spoke to the faculty for 20 minutes. I gave an overview of the IPI process and discussed the IPI protocol and rubric (see Figures 2 and 3). I asked the faculty for their permission to complete a two-year study at KMS. Mrs. Douglas shared her

excitement about the IPI process. Mrs. Fernandez, the teacher union officer and teacher leader, also voiced the union's approval of using the IPI process at KMS. The faculty listened, asked questions, and overwhelmingly agreed to participate in the research process. No teachers voiced opposition.

I was a novice researcher, and did not realize that I had begun what Herr and Anderson (2005) call a "pilot" in action research study, or "beginning the early cycles of research" (p. 71). They go on to explain the pilot study:

> Ideally, graduate students should begin to "pilot" an action research study while still taking coursework. We place pilot in quotes because, unlike traditional research, it is often hard to distinguish a pilot study from the real thing. In action research, a pilot study is likely to simply be early stages in the research cycle of an ongoing research spiral. (p. 71)

Basic Guidelines for the IPI Process

In August of 2005, at a presentation for Illinois NBCT, Valentine gave this brief summary of IPI:

> The IPI consists of six categories that distinguish [among] the types of learning experiences in which students are engaged. The IPI categories are simple to understand, grounded in the knowledge of best practice, and easily documented by a trained observer. The value of the IPI resides in the significance of the categories and the processes that ensure the validity and reliability of the data. The IPI is not a personnel evaluation process and should not be used in that manner. (¶ 2)

In Dr. Valentine's August 2005 presentation to NBCT, he posed rhetorical questions

that school personnel might use to reinforce facilitating the IPI process:

- How do you collect data that will be accepted by faculty as a fair and accurate representation of student learning throughout the school?
- How do you depict those data in a simple, meaningful format for analysis?
- How do you engage all faculty members in study and reflection about the data that will lead to improved instructional practices throughout the school?
- How do you use the data to document enhanced learning experiences for all students? (¶ 3)

The IPI process uses a consistent protocol that is listed below (Valentine, 2005):

- Create a snapshot of a typical school day.
- Use a map to systematically move through the school.
- Each classroom is observed for a short period of time, typically one to three minutes.
- Observers focus on the students' learning experiences during the first few moments of the observation.
- Each observation is coded anonymously. IPI observations should never be used for purposes of teacher evaluation.
- When a learning experience is borderline between two categories, the observer records the category that represents the more favorable learning experience—the profile being created is an "optimum" profile of student learning.
- Classes are not coded during the first five minutes or the last five minutes of a class or during content transitions.

- One hundred observations per day should be considered a minimum (125–150 are preferred and more typical) (Valentine, 2005, ¶ 4).

Besides the IPI protocol, the IPI process included the use of the IPI rubric to assist the coder in selecting the proper numeric code for each observation. The IPI rubric and protocol are shown in Figures 2 and 3.

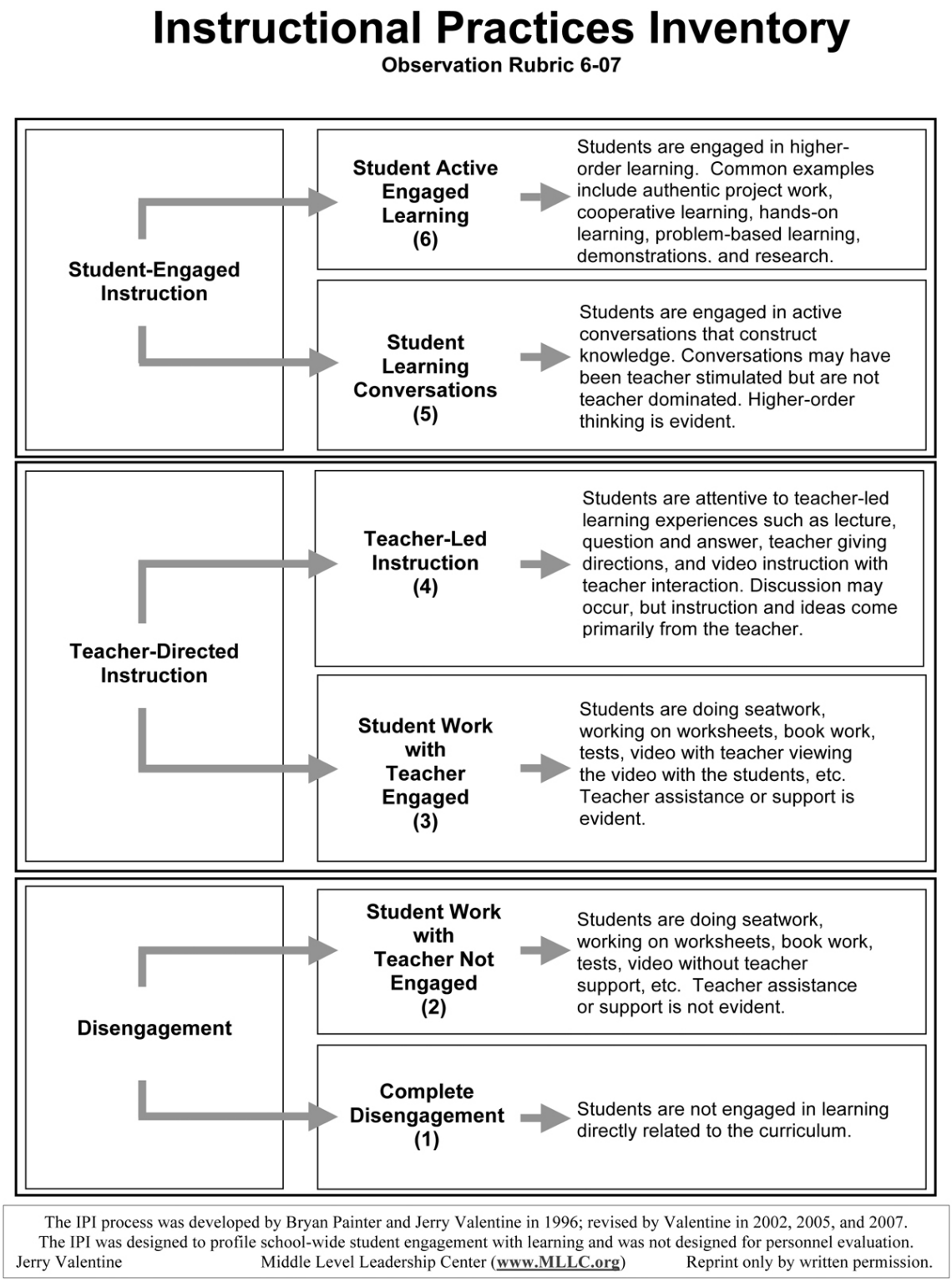
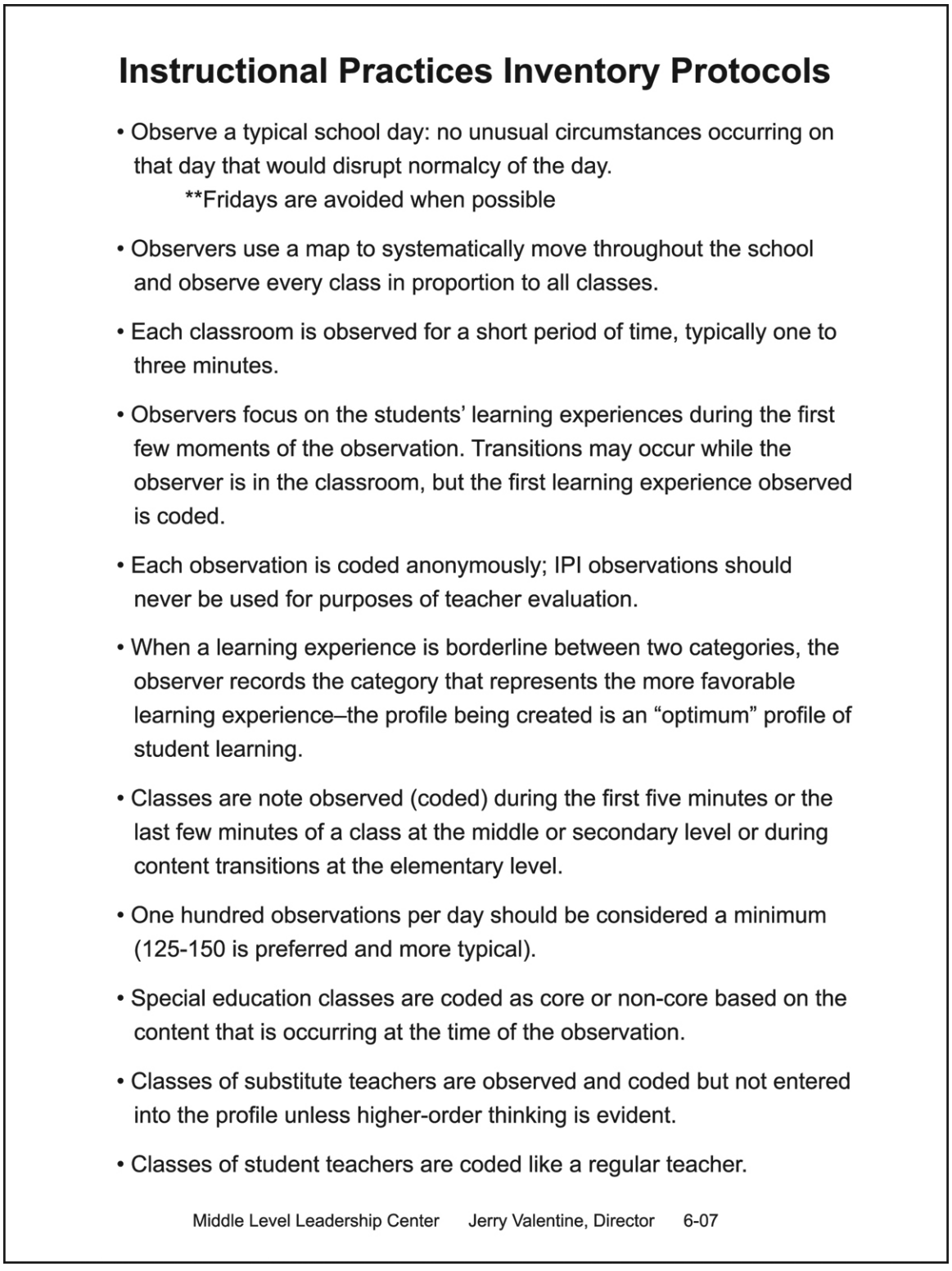


Figure 2. The IPI rubric.

Note. From Middle Level Leadership Center, Project ASSIST, by Jerry Valentine, 2007, p. A3. Copyright 2005 by MLLC. Reprinted with permission.



Instructional Practices Inventory Protocols

- Observe a typical school day: no unusual circumstances occurring on that day that would disrupt normalcy of the day.
  **Fridays are avoided when possible
- Observers use a map to systematically move throughout the school and observe every class in proportion to all classes.
- Each classroom is observed for a short period of time, typically one to three minutes.
- Observers focus on the students' learning experiences during the first few moments of the observation. Transitions may occur while the observer is in the classroom, but the first learning experience observed is coded.
- Each observation is coded anonymously; IPI observations should never be used for purposes of teacher evaluation.
- When a learning experience is borderline between two categories, the observer records the category that represents the more favorable learning experience–the profile being created is an "optimum" profile of student learning.
- Classes are note observed (coded) during the first five minutes or the last few minutes of a class at the middle or secondary level or during content transitions at the elementary level.
- One hundred observations per day should be considered a minimum (125-150 is preferred and more typical).
- Special education classes are coded as core or non-core based on the content that is occurring at the time of the observation.
- Classes of substitute teachers are observed and coded but not entered into the profile unless higher-order thinking is evident.
- Classes of student teachers are coded like a regular teacher.

Middle Level Leadership Center Jerry Valentine, Director 6-07

Figure 3. The IPI protocol.
Note. From Middle Level Leadership Center, Project ASSIST, by Jerry Valentine, 2007, p. A7. Copyright 2005 by MLLC. Reprinted with permission.

IPI Rubric and Protocol

Using the IPI rubric to code and the protocol as my guide for procedure, I moved through the school systematically, visiting all 29 classrooms. The classrooms included core classes (English, math, social sciences, and science) and non-core classes (physical education, choir, band, technology, and elective reading). Every full-time teacher learning experience was coded three to five times and every part-time teacher was coded two to three times. The difference in the number of codings per teacher depended upon several variables. First, following the IPI protocol, I did not code a classroom experience during a transition period, when a class was moving from one activity to another. If I entered a class during a transition time, I quietly exited without assigning a numeric code to the learning experience. Also, per the protocol, I did not code during the first or last five minutes of class time, because this time does not provide an accurate portrayal of the classroom experience.

I chose neutral color clothing and rubber soled shoes, so I could move unobtrusively from class to class. I intended to record the learning experiences with my presence being a minimal distraction. For each observation, I entered quietly, stood in the back of the room, and observed the students. Sometimes I looked over the students' shoulders as they worked. Occasionally, I conversed quietly with students, so I could better determine the type of learning experience.

At times, the corresponding code for a learning experience was obvious. For instance, if a teacher was lecturing and students were taking notes, I recorded a code four. If the teacher was not engaged with the class, and students were visiting or disengaged, I recorded a code 1. If a substitute teacher was in the classroom, per the IPI rules, I only

coded if the learning experience was a code five or code six. A student teacher, per the IPI protocol, was coded like a regular teacher.

However, some of the codings were not so easy to decide and required me to look over a student's shoulder or quietly ask individual students questions. For instance, if a student was taking a test, I had several things to consider. Were the questions on the assessment primarily based on rote memorization? If so, I coded the learning experience at a three (seatwork with the teacher engaged) or a two (seatwork without the teacher being engaged). Sometimes, test questions required higher-level, deeper thinking. Was the student answering essay questions that required analysis or synthesis? Then I coded a six, because the student was actively engaged in higher-order, deeper thinking. What if the test was part memorization and part synthesis? Then I coded the learning experience by looking at the category that best fit the majority of the questions.

If I had difficulty deciding on a code, I followed the IPI protocol of selecting the higher code. If I was still unsure of the proper coding, I discussed a similar generic learning experience with Mrs. Douglas (also a trained coder) or, in more difficult coding situations, I placed a call to Dr. Valentine. I sought to code accurately; this was my district, and I felt the validity of the scoring was critical. I followed this process for all six focused walk cycles.

Besides integrating standardized assessments into this research, this action research study was centered on the IPI process, using focused walks, the data from those walks, and faculty collaboration. After every focused walk, the data were presented to the teachers for group discussion. I provided refreshments, writing utensils, and handouts to create what I hoped was a genial and organized atmosphere. Teachers sat at round tables,

five or six to a table, and collaborated in both small groups and the large-group setting. Collaborative conversations were an integral part of the IPI process, because the faculty discussions were designed to foster critical reflections on teaching practices. Together, we worked to build a culture of collective commitment to the students and their learning. Dr. Valentine believes that a faculty's collective, collaborative commitment to student learning can lead to teacher efficacy which, in turn, can lead to student efficacy (2009).

First Focused Walk

On December 12, I arrived at KMS at 7:45 a.m. for the first focused walk. Mrs. Douglas had previously sent a memo to the teachers, reminding them that KMS was beginning the IPI process (see Appendix D). The secretary provided me with a map with room numbers for the school. For the first walk, I began the coding process at 8:30 a.m. and finished at 2:30 p.m., for a total of 114 classroom observations. Dr. Valentine has suggested that a focused walk needs a minimum of 100 observations, so I was gratified to see the number of observations were on target.

At the end of the school day, I entered the IPI observation category codes into an Excel spreadsheet designed to create three pie charts based on the observations. One chart depicted all observations in the core learning areas of math, science, social studies, and language arts. Another reflected data from all non-core classes, and a third pie chart represented data from all classes, combined.

I met with the faculty to facilitate their study of the data on January 3, 2008. I had hoped to get the data to the teachers sooner, but Christmas break was a week after the coding, and the next faculty meeting was the first Thursday of January. The agenda for the faculty meeting included the IPI, but was not dedicated exclusively to the IPI. This is

important to note, because the IPI process requires adequate reflection and discussion time. While Mrs. Douglas was a strong advocate of the IPI process, she also had other material to address during the faculty meetings. Knowing this, I thoroughly planned for each meeting to allow for dissemination of data and discussion.

At every meeting, the faculty and I reviewed the IPI categories and protocol. While this may seem redundant, the repetition of the protocol and rubric were part of the IPI protocol, so the faculty could become fluent with the IPI process. Next, I presented the three pie charts—core, non-core and all classes—that depicted the categories of learning experiences that I observed during the focused walk. I asked teachers to reflect on the data. In figures four, five and six, the teachers observed that a majority of their students' learning experiences were codes two, three and four, where the student completes worksheets or listens to lectures.

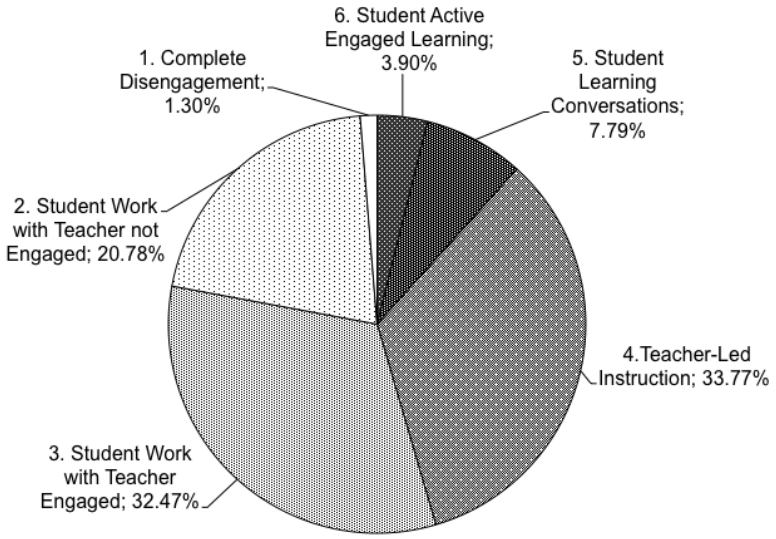


Figure 4. First focused walk, core classes.

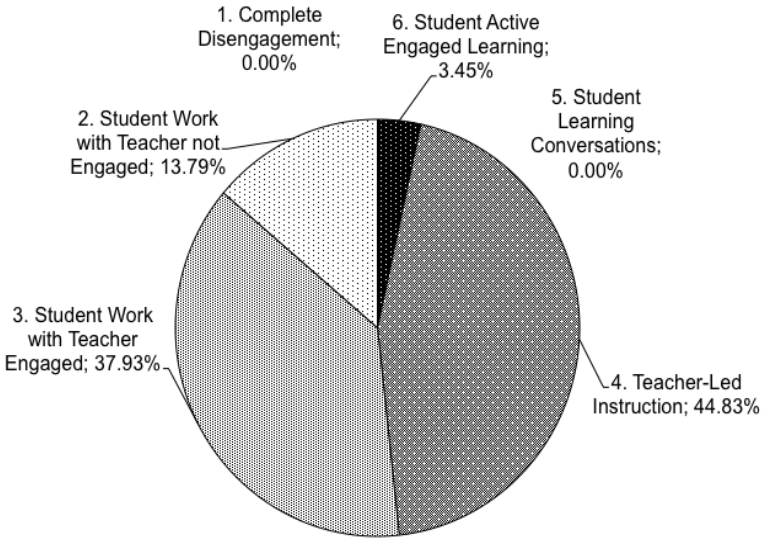


Figure 5. First focused walk, non-core classes.

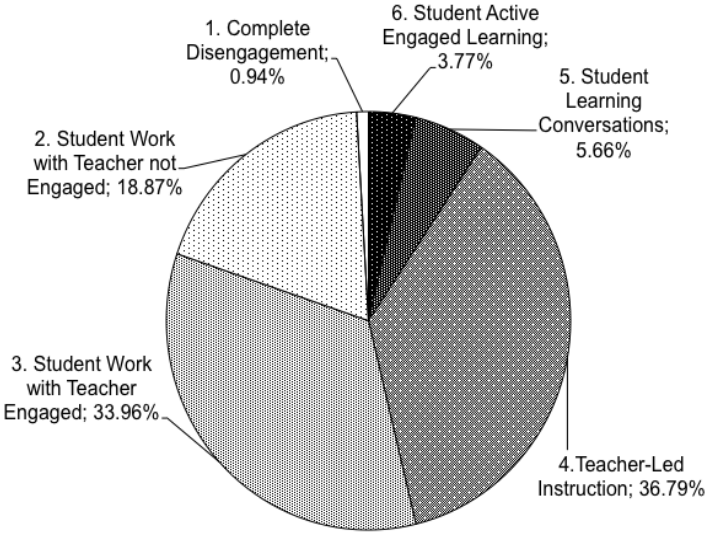


Figure 6. First focused walk, all classes.

Since this was the faculty's first experience with the data from a focused walk, much of the discussion focused on two concepts: (a) the coding system, so the faculty could better understand the process, and (b) the differences between core and non-core classes. Some teachers observed that the non-core observation profile did not document an observation in the category of student disengagement (code one). Others noted that the non-core classes were not making use of student learning conversations (code five).

Because the process was a new experience for the faculty and me, neither the teachers nor I had developed the skill for nimble conversations concerning the data. However, teachers did observe that, on the school-wide graph, most of the observations fell into two categories: (1) "teacher-led instruction," code four, which comprised 36.79% of the day's observations, and (2) "student work with the teacher engaged," category three, which comprised 33.96% of observations. Teachers also voiced concern that 18.87% of the observations received a code two, "student work without teacher engaged." In other words, students were doing worksheets or deskwork and the teacher was doing something else—checking e-mail, writing lesson plans, reading a book. In layman's terms, most of the class day was spent with teachers lecturing and talking to students (code four), and students completing worksheets that required simple fact finding or recall (codes two and three).

While the results were not extraordinary, they were disturbing to some faculty members. After all, this faculty was committed to their school vision, "Doing what's best for kids." Teacher-to-teacher dialogue continued, discussing ways to engage students in learning. The first focused walk laid the groundwork for future walks and deeper, more lively reflections.

Second Focused Walk

February 21, 2008, was the day of the second focused walk. On February 20, Mrs. Douglas sent out a reminder e-mail to the faculty that I would be doing a second IPI focused walk. Once again, I arrived at 7:45 a.m. I walked through the school following a logical progression, going from class to class in a systemized order based on room placement. I continued to follow the IPI protocol and rubric. Having been through the process in December, both students and teachers seemed to exude an air of familiarity with the process. I, too, felt more comfortable with the process, and recorded until 2:30 p.m. I followed the same protocol as the first focused walk. After my day of data collection, I entered 122 observations into the IPI Excel spreadsheet. I then planned for the next faculty study of the data, which was to occur on Thursday, March 6th.

Action research is a process, and as researcher and facilitator, I knew I needed to make some changes to my process. First, I decided to mix up the seating arrangement to allow for a different mixture of conversation and reflection. At the previous meeting, the core and the non-core teachers had been segregated from each other. I thought presenting the pie charts as two separate entities—core and non-core classes—had fueled a more separatist perspective. For this faculty work session, I intended to have the teachers look at the charts more holistically, as a faculty. Toward this goal, I set up circular tables in the library and scattered candy and pencils on every table. I used cardstock to number the tables one through seven. When the teachers arrived for the meeting, I numbered them from one to seven; teachers sat at the table with the corresponding number. Now the core and non-core faculty were mixed together and ready for dialogue.

I read out loud the rubric for the six focused walk categories and the IPI protocol (see Figure 2). At every faculty meeting that followed a focused walk, I handed out copies of the rubric and protocol. By keeping the IPI information in front of the teachers, I felt they would have a better opportunity of integrating the system into their memories. I led a general discussion of the IPI categories and answered questions. Then I gave each teacher copies of the focused walk charts from the first and second focused walks. I asked the faculty to study and reflect on the data and discuss their observations together in small groups at their tables. When they looked at Figures 7,8, and 9, the teachers immediately saw that engaged learning experiences had increased since the first focused walk.

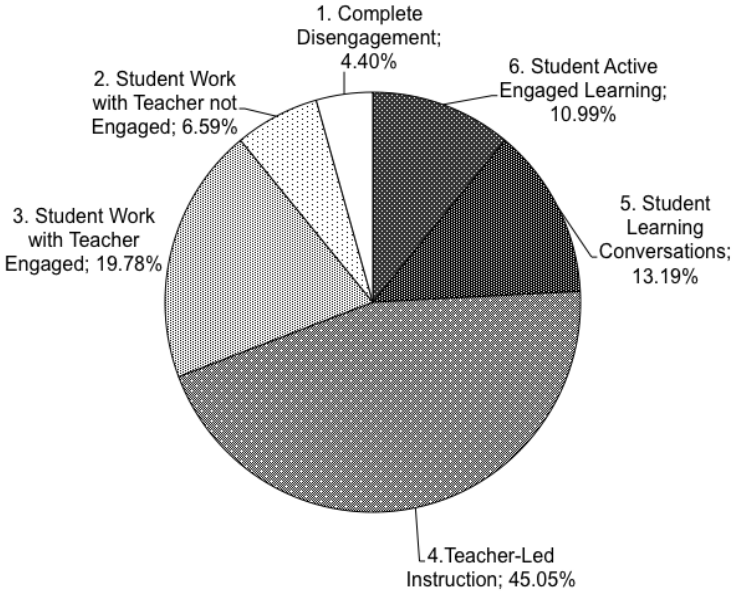


Figure 7. Second focused walk, core classes.

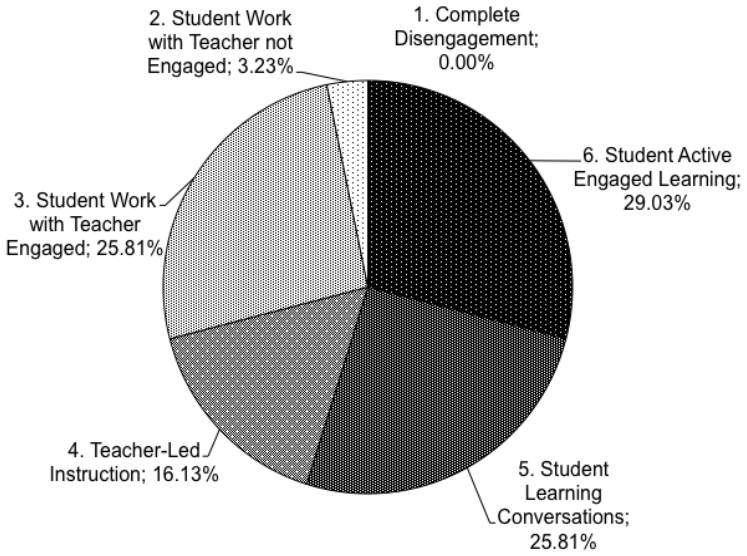


Figure 8. Second focused walk, non-core classes.

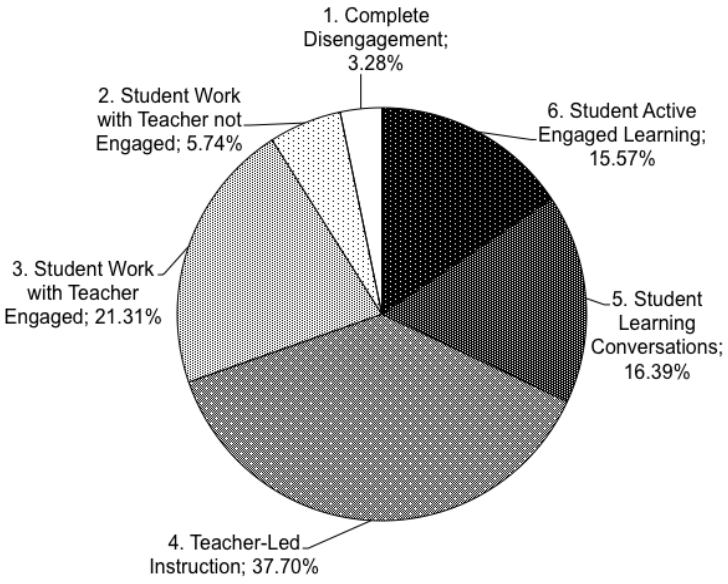


Figure 9. Second focused walk, all classes.

The discussion was lively. One teacher voiced concern that observations coded as four were not receiving the respect they deserved. He said that many decided to be teachers because of inspirational educators who were role models in the lecture method. He also said that some material was best presented in lecture format. Other teachers agreed. I agreed with his observation, and stated that this faculty meeting would be coded a four, since I had presented the information to the teachers in a lecture format. But I also pointed out that I had moved the discussion to a code five (teachers talking to teachers, constructing knowledge through peer discussion). I assured him that the levels were not intended to be hierarchal or judgmental; a five was not necessarily better than a six, which was not necessarily better than a four, nor were either necessarily more appropriate than a four. The numbers were used to code learning experiences that were being observed in the classroom. This seemed to relieve the teachers who enjoyed using a lecture format.

Next, I asked teachers to discuss the data (a code five) among themselves at their tables. I asked them to analyze data by comparing the first focused walk to the second focused walk. They discussed the data and wrote what they observed. At the conclusion of the meeting, teachers gave me their comments. The small-group discussions produced a series of observations. Comments mentioned by two or more groups were listed below:

- There were increases in fives and sixes.
- The fours seemed to remain steady between both focused walks.
- The threes went down.
- The twos went down.
- I thought about the process more.

- I didn't understand the process for the first walk.
- It seems like the school is shifting to more fours, fives, and sixes.
- Increased disengagement (code one) increased—why?
- The first walk was the end of a grading period.
- Non-core classes have more fives and sixes.
- Could the ones be the same teacher over and over?

Several of the groups "did the math" when they compared the whole school pie chart. One table observed the following: "The first walk had 54% of the observations coded one, two, and three, while on the second walk, the percent for categories one through three was down to 30%." From the teachers' comments and conclusions, I observed that the teachers were beginning to consider the value of a positive school-wide change. Interestingly, teachers questioned if the code ones were observations from the same teachers; they did not question if the code fives and code sixes came from the same group of teachers. Because the IPI ensures anonymity, the staff wondered but did not have evidence that would or would not support their assumption. As the data collector, I did have insight about the validity of their comments but chose not to share that insight, as it might compromise the anonymity of the process and be divisive among the staff.

For a reflective closure, I asked each table to share with the whole group a thought, concern, or observation. Several mentioned that I had seemed to observe their classrooms at the same time during their lesson—maybe at the beginning or the conclusion of their lesson. They asked if I could vary my walking pattern so I could see different sections of what they were teaching. Several teachers said they were engaging students in higher-order thinking, but I had not been present to record those learning

experiences. Most noticed that the trend from engaged learning appeared to be moving in the right direction. By the end of the meeting for the second focused walk, I observed the shared enthusiasm and interest being generated by the faculty.

Third Focused Walk

The third focused walk was the last walk of Phase One in my action research study. By now, I saw merit in Herr and Anderson's reference to an action research study as "designing the plane while flying it" (2005, p. 69). Each time I repeated the cycle of focused walks, I discovered ways to improve how I facilitated the IPI process. I agreed with the teachers' observation from the second walk that, while I observed lessons during four or five different periods, I seemed to be arriving in the classrooms during the same part of the lesson. I contacted Dr. Valentine and asked if, during every other trip around the school, I could reverse my walking pattern. He also indicated that the dilemma I described happens on occasion when the size of the school is mathematically proportionate to the average number of minutes per observation. He agreed that, as long as I continued to follow a consistent pattern, I could reverse my direction to vary the times of my observations during a class period.

With this in mind, I did the third focused walk in April. While teachers had all the dates for my focused walks, Mrs. Douglas sent an e-mail that morning to remind teachers of my visit. This was the first focused walk where she had not reminded the teachers at least one day in advance.

I followed the same protocol that was discussed with the first focused walk. I arrived at the school at 7:45 AM, began coding five minutes after classes began, and stopped coding at 2:30 PM, with a total of 133 observations. At the end of the school day,

I recorded the codes into the IPI's profile spreadsheet. Again, I created three pie charts that provided a visual representation for the type of learning experiences for the school day. However, for the faculty meeting that followed the focused walk, I added something else—a longitudinal chart to show the changes across the three focused walks.

The final IPI meeting for the year occurred during the regular faculty meeting on May 1, 2008. After the third focused walk cycle, the faculty's next focused walk would occur the following school year; teachers would have six months to forget the process. I knew that the faculty had discussed the importance of teacher efficacy among themselves and with their principal during faculty meetings. I also knew that Mrs. Douglas, the principal, was supportive of the IPI process at KMS. With that in mind, I believed that KMS teachers would work with Mrs. Douglas to establish the IPI at their school if I could provide data demonstrating the IPI's merit. To properly conclude the first year of the study, I intended to show the teachers their school's longitudinal patterns for the three focused walks.

For the May 1, 2008, faculty meeting, I worked to remain true to the IPI process while accommodating the school's needs to address other issues during their one-hour meeting. I compressed my discussion topics with the teachers. When the teachers entered the library, I asked them to sit by teams, a third variation of a seating arrangement for the third focused walk.

As in the past two meetings, I reviewed aloud the six focused walk categories and the IPI protocol (see Figure 3). At every faculty meeting that followed a focused walk, I handed out copies of the rubric and protocol. By keeping the IPI information in front of the teachers, I felt they would have a higher probability of integrating the system into

their thinking when designing lessons. I led a discussion of the IPI categories and answered questions. Then I gave each teacher copies of the focused walks charts from the third focused walks. I asked them to reflect on the data and then provided the longitudinal charts for three observations during the school year. When the teachers observed the pie charts for the third focused walk, Figures 10, 11, and 12, along with the longitudinal charts, Tables 1, 2, and 3 they were impressed with the school's consistent movement toward more lessons that incorporated engaged learning.

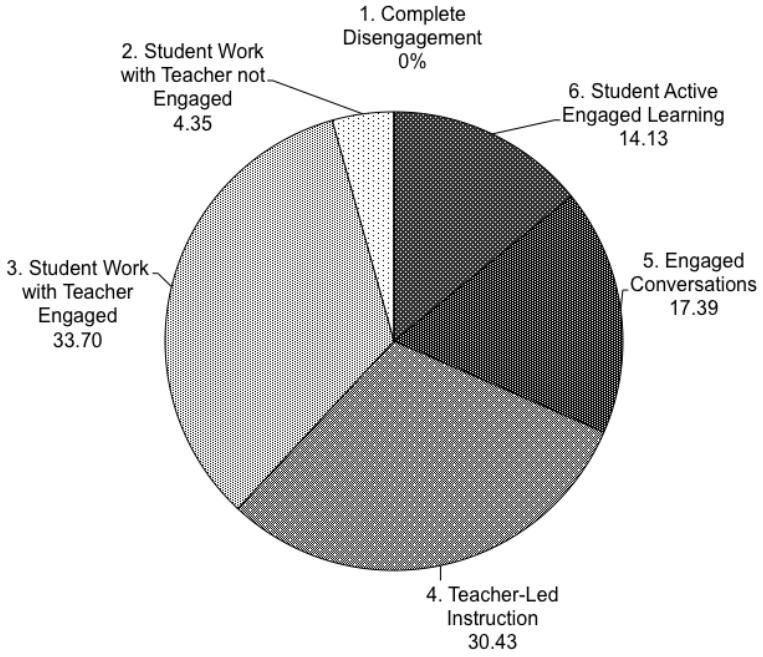


Figure 10. Third focused walk for core classes

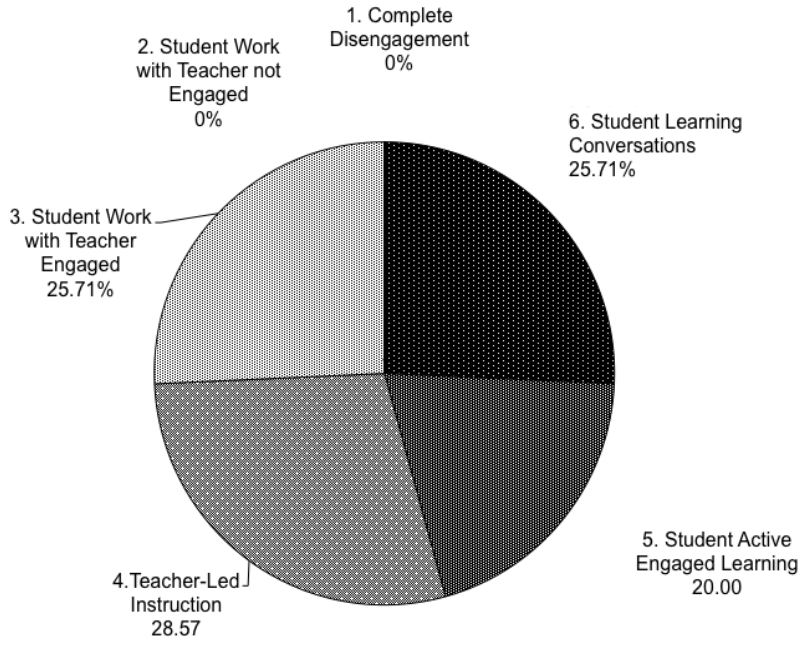


Figure 11. Third focused walk, non-core classes.

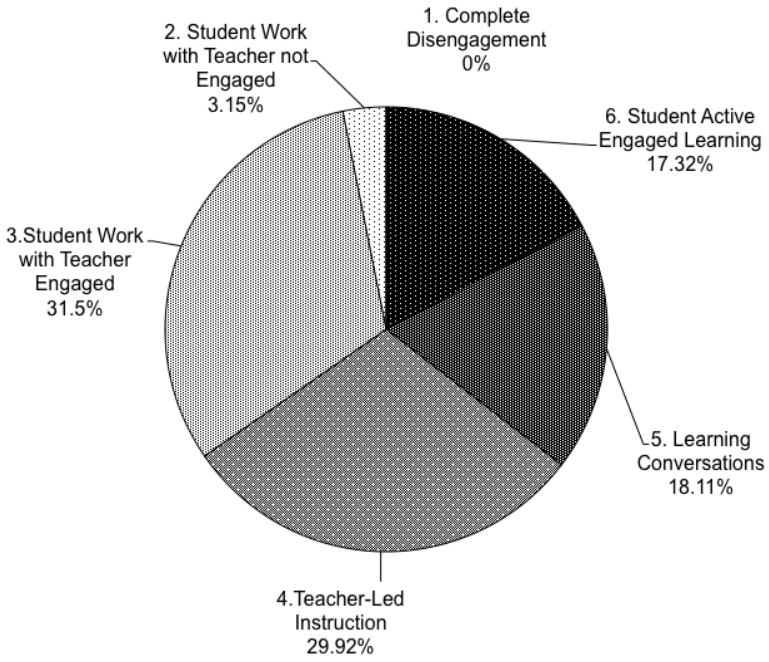


Figure 12. Third focused walk, all classes.

I compiled, for my own background knowledge, KMS's ISAT scores from the past five years (see Appendix E). Then, for this discussion, I provided a chart from Dr. Valentine's IPI research that showed the IPI categories observed in schools that, through standardized testing, were determined to be highly successful or unsuccessful (see Appendix F). We looked at the IPI chart as a whole group, with the use of an overhead projector. As a faculty, teachers brainstormed some strong verbs—synthesize, analyze, create, develop, design—that teachers might want to consider when designing lessons. Finally, I gave the teachers the IPI longitudinal tables that tracked the data collection for all three focused walks at KMS see Tables 1, 2, and 3).

The longitudinal tables were divided into three parts. The first part displayed the learning experiences by code, from one to six; the second part totaled categories five and six, then categories two and three. The final part totaled percentages for categories four, five, and six and then one, two, and three. The tables were presented for core classes, then non-core classes, and finally for a combination of both core and non-core classes.

Table 1

IPI data profile longitudinal comparison for core class observations

IPI Coding	Data Collected: 12/12/07	Data Collected: 2/21/08	Data Collected: 4/28/08	Average
(6) Student Active Engaged Learning	3.90%	10.99%	14.13%	9.67%
(5) Student Learning Conversations	7.79%	13.19%	17.30%	12.74%
(4) Teacher-Led Instruction	33.77%	45.05%	30.43%	36.42%
(3) Student Work with Teacher Engaged	32.47%	19.78%	33.7%	28.67%
(2) Student Work without Teacher Engaged	20.78%	6.59%	4.35%	10.57%
(1) Student Disengagement	1.30%	4.40%	0	1.9%
(5-6) All Higher-Order Learning	11.69%	24.18%	31.52%	22.46%
(2-3) All Student "Seatwork"	53.35%	26.37%	38.05%	39.26%
(4-5-6) Teacher-Led Instruction & Higher-Order Learning	45.46%	69.23%	61.95%	58.88%
(1-2-3) Disengaged & Student Seatwork	54.55%	30.77%	38.05%	41.12%

Table 2

IPI data profile longitudinal comparison for non-core class observations

IPI Coding	Data Collected: 12/12/07	Data Collected: 2/21/08	Data Collected: 4/28/08	Average
(6) Student Active Engaged Learning	3.45%	29.03%	25.71%	19.40%
(5) Student Learning Conversations	0	25.81%	20%	15.27%
(4) Teacher-Led Instruction	44.83%	16.13%	28.47%	29.81%
(3) Student Work with Teacher Engaged	37.93%	25.81%	25.71%	29.81%
(2) Student Work without Teacher Engaged	13.79%	3.23%	0	5.67%
(1) Student Disengagement	0	0	0	0
(5-6) All Higher-Order Learning	3.45%	54.84%	45.71%	34.67%
(2-3) All Student "Seatwork"	51.72%	29.04%	25.71%	35.49%
(4-5-6) Teacher-Led Instruction & Higher-Order Learning	48.28%	70.97%	74.28%	64.51%
(1-2-3) Disengaged & Student Seatwork	51.72%	29.04%	25.71%	35.49%

Table 3

IPI data profile longitudinal comparison for total observations

IPI Coding	Data Collected: 12/12/07	Data Collected: 2/21/08	Data Collected: 4/28/08	Average
(6) Student Active Engaged Learning	3.77%	15.57%	17.32%	12.22%
(5) Student Learning Conversations	5.66%	16.39%	18.11%	13.39%
(4) Teacher-Led Instruction	36.79%	37.7%	29.92%	34.8%
(3) Student Work with Teacher Engaged	33.96%	21.31%	31.5%	29.92%
(2) Student Work without Teacher Engaged	18.87%	5.74%	3.15%	9.25%
(1) Student Disengagement	0.94%	3.28%	0	1.41%
(5-6) All Higher-Order Learning	9.43%	31.96%	35.43%	22.52%
(2-3) All Student "Seatwork"	52.83%	27.05%	34.65%	38.18%
(4-5-6) Teacher-Led Instruction & Higher-Order Learning	46.22%	69.66%	65.35%	60.41%
(1-2-3) Disengaged & Student Seatwork	53.77%	30.33%	34.65%	39.58%

I presented the KMS teachers with two questions:

1. What do these data tell us?
2. What are our goals for next year?

From the IPI training I had received, I believed it was important for the teachers to look at the data with an eye on the future, since the IPI research study had one more year to go. The intention, irrespective of my study, was to foster ongoing improvement in the students' learning experiences. I took observational notes as teachers reviewed and discussed the data. The following are comments made by teachers during their discussion:

- We're having more fives and sixes (student engaged in higher-order, deeper thinking) now than we had in the beginning of the process.
- We have fewer ones (student and teacher not engaged in learning)– good!
- Teacher-led instruction (four) is still the largest category.
- At fives and sixes, our kids become stakeholders in the process.
- The longitudinal chart really increases our awareness of where we've been.
- The third walk was announced that morning—that gave a better picture of what really goes on in the classroom.
- KMS is "doing what's best for kids"—high three (students doing seatwork with teacher engaged) through six (all higher-order, deeper thinking except peer-to-peer engaged learning)!

I was eager to read the teachers' comments, and pleased to see that the majority of the teachers were making meaning from the data. I hoped that their reflections would lead to positive, collaborative growth for the faculty.

Teachers studied Dr. Valentine's data (Appendix F) and made the following comments:

- We're below highly successful in category six, but we're way above highly successful on the fives (higher-order, deeper thinking created by students engaging with students).
- Fives and sixes together combine to place us in Dr. Valentine's "highly successful" category.
- KMS has 31.25% fives and sixes, which is higher than 29.3% for the "highly successful" category.
- The data show we are going up overall. When you look at threes, fours, and fives, we are right on target for being highly successful. But when we break this down, we need to increase our sixes.

I was impressed that teachers, while they were "right on target for being highly successful," also wanted to improve student learning experiences by increasing their sixes.

The following is a list of comments teachers made in response to the question, "What are our goals for next year?"

- We need professional development!
- More awareness of various ways to teach kids how to increase engagement
- Use variety to meet all learning styles
- We would like to have more fives and sixes next year!
- To continue to increase and have higher numbers in all of the highly successful categories
- More balanced instruction next year

- Larger classes (encore) necessitate engaged learning activities—plan more specifically
- The subject matter (encore) necessitates it to be more engaged learning
- More balanced instruction
- More engaged learning possibly
- Use verbs for planning; be more aware of verbs
- Continue to strive for fives and sixes—plan for them more purposefully
- Making us aware of the data are helping us to plan better, at a higher level, with lessons
- Try to use the verbs during the planning—that helps!
- Professional development—go to workshops supporting fives and sixes
- Learn more teaching strategies that use sixes for our own content areas
- Collaboration in subject areas will help!
- Our goals for next year would be to continue where we left off, rather than start over and work up again. We want to continue our growth and increase our 6s!

The comments made by the teachers during this third study session were both promising and positive. Teachers were excited to see the fives and sixes on an upward trend. They wanted to know more about the IPI process and were excited to continue the research study the next academic year. As a faculty, they had collaborated on ways to integrate into their lessons that indicated higher-order thinking. They discussed various verbs that were commonly associated with higher-order, deeper thinking and the value of considering those verbs as they design lessons. They reflected on the data and, collectively, looked for ways to improve the student learning experiences at KMS. The

IPI had created an awareness and climate for change in student learning experiences.

After the meeting, I typed up the teachers' comments and placed a copy in each teacher's mailbox. Providing the list to everyone served as a reminder of the past year's IPI work and a basis to resume IPI the next year. During the summer I planned for Phase Two of the action research study.

Chapter Five: Phase Two of the IPI

"Not everything that counts can be counted and not everything that can be counted counts."
Albert Einstein (1879 – 1955)

Phase Two

I collected data for my research study over the course of two academic years. The first IPI focused walk had taken place in the fall of 2007; the sixth and final focused walk occurred in the spring of 2009. During the summer of 2008, the midway point between the walks, I reviewed the two standardized assessment programs that KMS used. The NWEA MAP testing was administered three times a year, in the fall, winter, and spring; the state ISAT test was administered every spring. Since ISAT was the assessment tool for NCLB, I reviewed ISAT data for seventh and eighth grade from 2003 to 2007, five years prior to my study (see Appendix E).

The ISAT test results were classified into four categories: below academic standards, does not meet state standards, does meet state standards, and exceeds state standards. With NCLB, the bar for each category is raised every year, with the goal that all students would fall into the "meets" or "exceeds" categories by 2014. One special education subgroup at KMS had not made AYP in 2008. During the course of my study, KMS teachers were eager to help all students meet the demands of NCLB. They saw connections between the IPI process and raising achievement test scores to meet AYP. More importantly, the teachers saw connections between the IPI process and increasing the type of learning experiences for their students.

The Illinois State Board of Education commissioned an independent assessment of the ISAT in 2001. In this audit, John Wick, a professor emeritus of education at Northwestern University, performed an evaluation to test the soundness of the ISAT. The

audit concluded that the test was "technically sound, meeting the 1999 Standards for Educational and Psychological Testing of the American Psychological Association" (Wick, 2002, p. 3). The audit specified these key findings:

- ISAT is valid. The test measures the skills and knowledge it purports to measure.
- ISAT is reliable. Similar levels of performance on the test produce consistent scores over time.
- *ISAT equates well.* Scores are comparable from year to year.
- *ISAT is appropriate for all levels of student performance.* It avoids "floor" and "ceiling" effects.

In addition, the report compared ISAT with the Stanford Achievement Test, Ninth Edition (SAT-9), and concluded that, "the validity and reliability of ISAT match[ed] or exceed[ed] those of the Stanford Achievement Test" (Wick, 2002, p. 3).

I still had concerns about using the ISAT as an assessment tool, because I noticed a reporting discrepancy: Some yearly reports provided a state median score, and other yearly reports did not. I contacted Dr. Dennis Goedecke, planning consultant for the Illinois State Board of Education, and interviewed him via phone. Goedecke explained that he was updating ISBE's webpage for ISAT scores, and there was "an unfortunate hole in the research." He explained that from 2003 to 2005, the state superintendent of schools had not allowed the ISBE to create or publish a state mean for ISAT scores. The philosophy behind this, according to Goedecke, was that the state superintendent did not want to create a competition between school districts for the highest score. Instead, during this time period, ISAT scores were reported in the four previously mentioned categories as percentages in score groupings. However, Goedecke explained that

competition still evolved among districts, with some districts competing for the largest percentage in the top two categories—meets or exceeds state expectations. As a result, starting in 2006, Illinois resumed recording a mean state ISAT score, as well as mean scores for districts. This was good news for my study, because I had used ISAT scores from years 2007 to 2009.

Goedecke explained another problem I would face if I tried to compare multiple years of ISAT scores. From 1999 to 2005, the ISAT scores were not vertically scaled; the scores could not be compared from grade level to grade level. During this time period, the test's scoring ranged from 120 to 200. However, in 2006, the ISAT scoring range changed to a variable range without a ceiling for the brightest students. This change of scoring had two important benefits. First, the scale became vertical, allowing the possibility for educators to compare individual and group scores from year to year. Second, removing the ceiling for the highest score allowed the scores for the brightest students to better reflect their test results. Goedecke explained that, since 2006, the expectations are that the scoring remains consistent from year to year, with the older or more knowledgeable students expected to receive the higher scores. Again, since my data collection was concerned with ISATs from 2007 to 2009, I was gratified by his information.

For more information, Goedecke directed me to the Interactive Report Card (IRC) for Illinois, a website established, supported, and maintained by Northern Illinois University in partnership with ISBE. The IRC site stated, "Since 2006 the ISAT testing of reading and mathematics has been scored on a common scale for all grades. This 'equating' process affords a more reliable measure of student learning that is comparable

from year to year over time" (ISBE, 2009b, ¶ 3).

Though the ISAT was accepted by the ISBE to be a valid assessment, I believed that relying on this test as the sole assessment would be problematic for my study. The ISAT was given to students once a year; I wanted, along with the ISAT, an assessment that measured student growth several times a year. I also sought an assessment with a history of consistency in scoring. For this, I looked at the Northwest Evaluation Association, a national, non-profit organization dedicated to children and learning.

Kaskaskia Middle School used NWEA's Measures of Academic Progress (MAP) test. The MAP test was given to students three times a year, in the fall, winter, and spring. The tests, aligned to state standards, were computer adaptive to the student's abilities. According to NWEA's recent 2008 Normative Data report for MAP testing, MAP had "the unique ability to measure a student's achievement and academic growth independent of grades, across time" (NWEA, 2008, p. 1) As of 2008, "over 2.8 million students from 6,905 schools in 1,123 districts located in 42 states" had participated in MAP testing (p. 1). NWEA has an extensive databank where status norms were created by using a "stratified sample of students representing the national school age population, more specifically, ethnicity and socio-economic status at each grade level" (p. 1).

I was drawn to MAP for several reasons. First, the scoring was vertical, so a 100 in grade two would be the same as a 100 in grade 8. Second, KMS began using MAP testing for seventh- and eighth-grade students in 2007, so I would have data for the middle school students. Third, MAP had a proven track record. I decided to use both standardized tests, ISAT and MAP, as assessment tools in my action research study.

Besides integrating standardized assessments into this research, this action research study was centered on the IPI process, using focused walks, the data from those walks, the data from the faculty meetings that followed the focused walks, and faculty collaboration. After every focused walk, the data from the walk was presented to the teachers for review and discussion. As in the previous year, I provided refreshments, writing utensils, and handouts, with the hope of creating a genial and organized atmosphere. Teachers sat at round tables, five or six to a table, and collaborated in both small groups and the large group setting. These collaborative conversations were an integral part of the IPI process, because the faculty discussions were intended to foster critical reflections on teaching practices. Together, we worked to build a culture of collective commitment to the students and their learning.

Fourth Focused Walk

Mrs. Douglas, the principal at KMS, and I scheduled three focused walks for the 2008–2009 academic year and sent the dates to the faculty. The first focused walk of the school year, scheduled for October 16, 2008, was also the fourth focused walk for the two-year action research study. I attempted to schedule all focused walks during the later part of the month, since the regularly scheduled faculty meeting for KMS was the first Thursday of each month. I needed time to create the data charts for the faculty discussions while also presenting the data in a timely manner. I followed the same rubric and protocol for the previous three walks (see Figures 2 and 3). For the fourth focused walk, I began the coding process at 8:30 AM and finished at 2:30 PM, for a total of 132 classroom observations. The end of the school day, I typed the observation codes into an Excel spreadsheet and created three pie charts—core, non-core, and combined classes—

depicting the learning experiences that I observed that day.

I met with the KMS staff to review at a faculty meeting on November 6, 2008. Previously, my time with the faculty had been sandwiched into the agenda as another line item at an hour-long faculty meeting. However, I was able to have more time with the teachers at this meeting, because the faculty had release time for parent conferences and meetings.

Seven months had passed since the third focused walk; I believed it was important for me to review with the teachers the IPI data the faculty had created and studied last year. I made copies for the teachers of the IPI protocol and rubric (see Figures 3 and 4). I also copied the pie charts for the three focused walks from the previous year (see Chapter Four). I presented an IPI PowerPoint review from the Middle Leadership Learning Center (MLLC) at University of Missouri-Columbia, where Dr. Valentine is the director. Together, the faculty and I reviewed, as a whole group using handouts, the IPI guidelines and KMS's journey through Phase One. The next step was to present the faculty with the figures 13, 14, and 15 from the fourth and most recent focused walk. Teachers were surprised to see that codes two and three, or "seatwork" was up from the third focused walk.

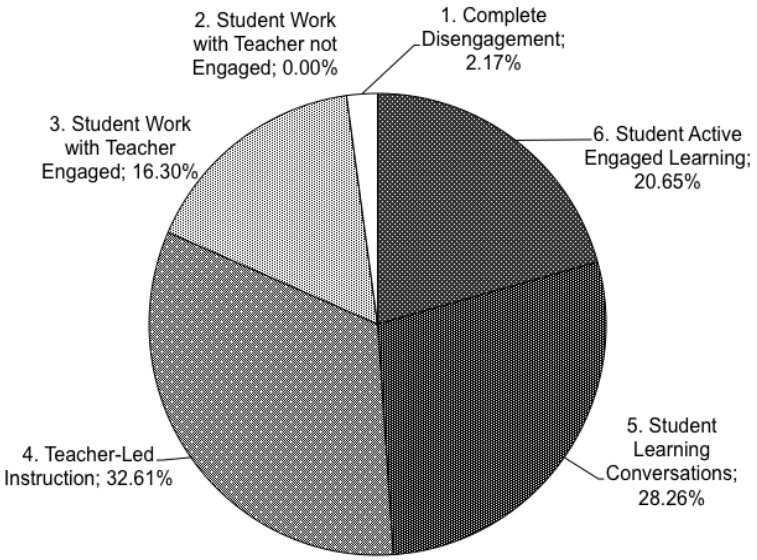


Figure 13. Fourth focused walk, core classes.

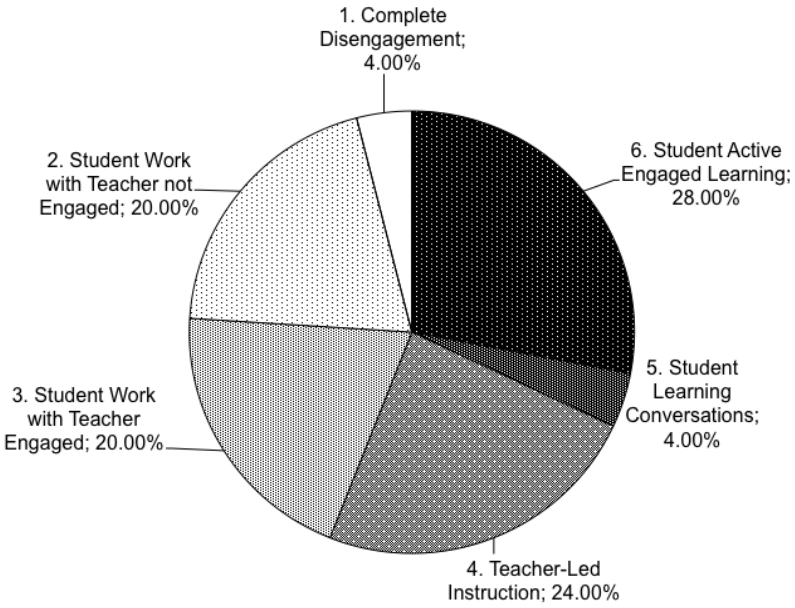


Figure 14. Fourth focused walk, non-core classes.

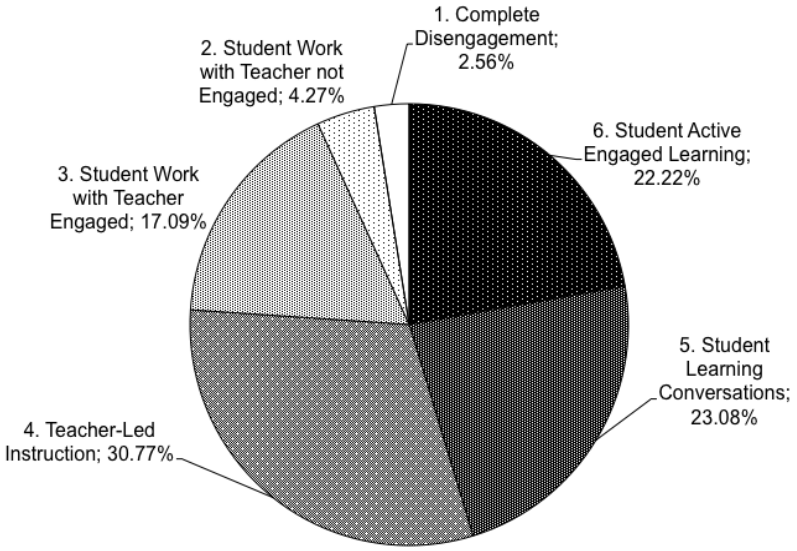


Figure 15. Fourth focused walk, all classes.

Every faculty member was given copies of the pie charts. After quietly studying the charts, each table of teachers worked in small groups to discuss three questions from MLLC's PowerPoint (Valentine, 2005, p. 9):

- What can we learn about our current practices from the IPI data?
- What do we see in the data profiles that we can feel good about or celebrate?
- What do we see in the data profiles that we should be concerned about and thus study and discuss more deeply?

After the teachers had collaborated in small groups, I facilitated a whole-group meeting, where teachers discussed their observations of the data and the PowerPoint questions. Several teachers noticed that the four, five, and six categories were up from the first focused walk but had dropped from the most recent walk. That observation led to a faculty discussion where they voiced possible reasons for the drop. I took field notes

during the discussion. The comments I recorded were the following:

- It was easy to forget the IPI, since six months had passed since the last walk.
- The walk was early in the school year and teachers were still getting used to their schedule.
- Teachers wanted more help understanding the differences between 5s and 6s.
- What kind of a lesson incorporates higher-order thinking skills?

I realized that the teachers were still having problems understanding how to develop lessons that helped students engage in higher-order, deeper thinking. After the meeting, Mrs. Douglas and I discussed the meeting and the faculty comments. While I had designed every IPI faculty meeting as a form of staff development, I realized I needed to intensify the level of training. Mrs. Douglas and I agreed that, for future meetings, we would include teachers sharing lessons that encouraged higher-order thinking skills.

Fifth Focused Walk

I followed the same rubric and protocol used for the previous three walks in Phase One. I began the coding process at 8:30 AM and finished at 2:30 PM, for a total of 117 classroom observations. At the end of the school day, I typed the observation codes into an Excel spreadsheet and created Figures 16, 17, and 18. These three pie charts for core, non-core, and combined classes depicted the learning experiences I had observed that day. The faculty and I met again on February 5. As in the past meetings, I provided the teachers with copies of the IPI protocol and rubric (see Figures 3 and 4). I read aloud the IPI process while the teachers followed on the handouts. I also gave each teacher a copy of the three pie charts from the January 29, 2009, focused walk.

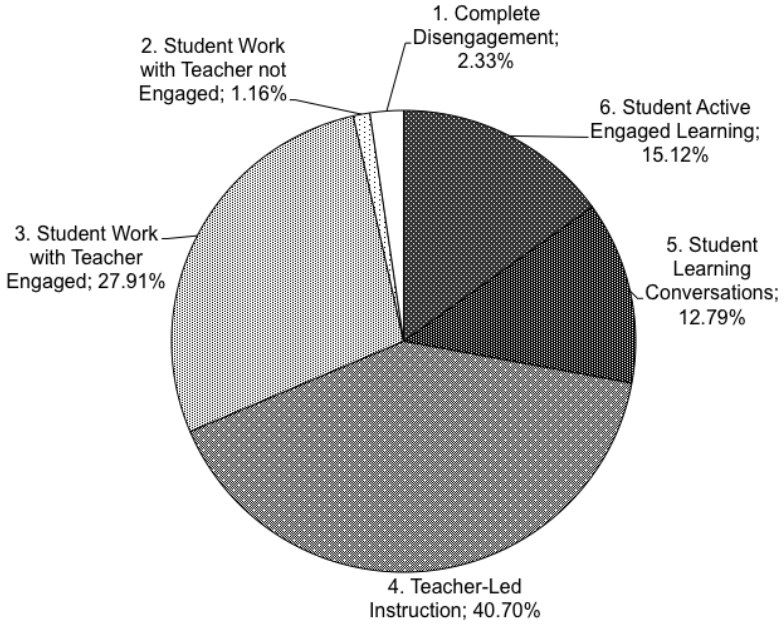


Figure 16. Fifth focused walk, core classes.

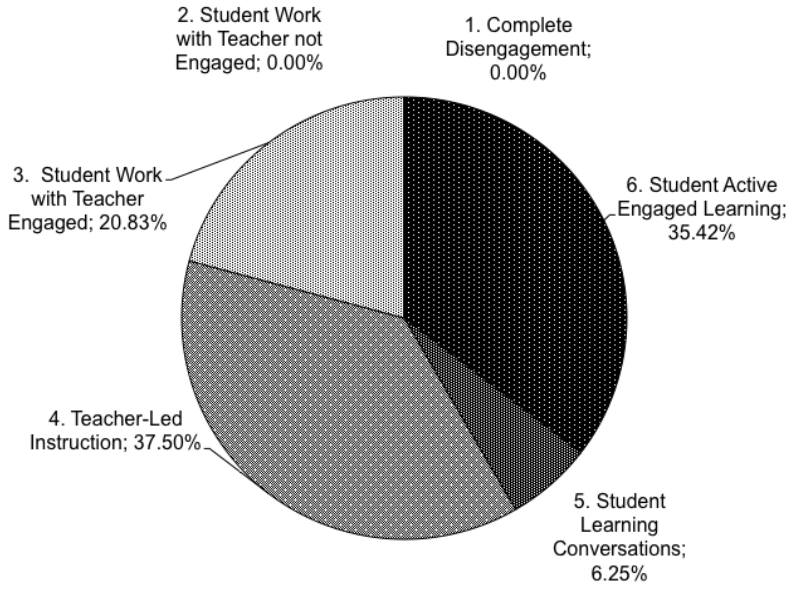


Figure 17. Fifth focused walk, non-core classes.

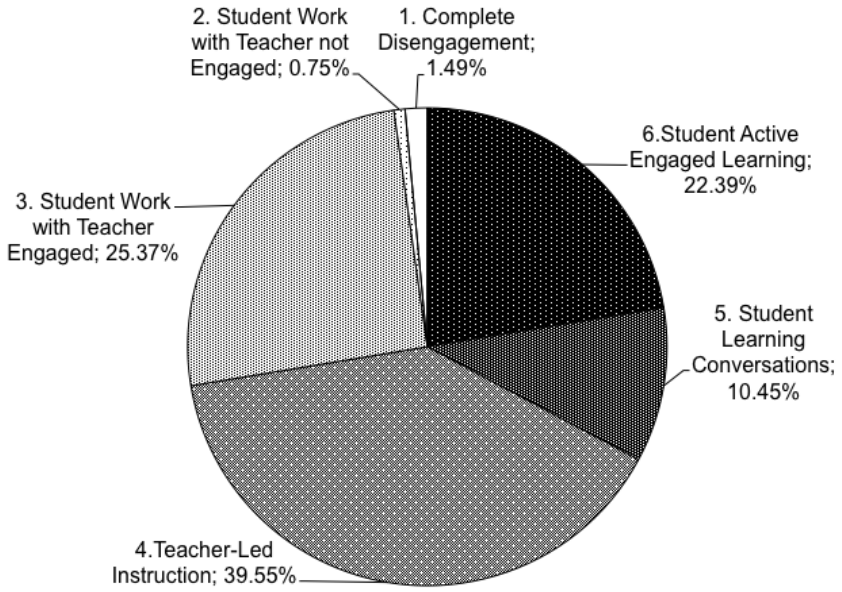


Figure 18. Fifth focused walk, all classes.

From my research, I had learned that the faculty could increase the number of higher-order learning experiences at KMS by engaging in collaborative conversations that moved stakeholders toward teacher and student efficacy. Research showed that when teachers collaboratively work together, the faculty can build a culture of collective commitment (DuFour & Eaker, 1998; DuFour, 2004). I also knew from my most recent meeting with the faculty that some of the teachers were eager to discuss lesson plans that could create a learning experience of a code five (students are engaged in active conversations that construct knowledge) or a code six (students are engaged in higher-order, deeper thinking). With these thoughts in mind, I discussed the different numerical codes with the faculty.

In a whole group setting, we worked together to brainstorm lesson ideas that engaged students in higher order, deeper thinking. Each table was given a large tear sheet to write down lesson ideas that could be used to engage higher-order, deeper thinking, or in the IPI terms, lessons that would be considered a code five or a code six. The teachers discussed their ideas in small groups at their tables, and then I moved the faculty into a whole-group discussion. In their whole-group discussion, teachers verbalized lesson ideas that fell into the IPI category of five, because the students—not the teacher—control the discussion. The teacher may serve as a guide or a stimulus, but code five lessons are student dominated. This category is a stark contrast to lessons that fall into the IPI category of four, in which the teacher dominates the discussion. Some lesson plan ideas for code fives emerged from the small group table discussions. I took field notes of the discussion. Some of the ideas in my notes included the following:

- Using a think/pair/share lesson, in which two students interpret and discuss a difficult passage from their reading or homework
- Facilitating student discussion, with the teacher serving as a guide when needed
- Debating the properties of quadrilaterals
- Reading a shared piece of literature and discussing its meaning
- Meeting in small groups at tables and discuss answers to journals or questions
- Competing in groups with flash card activities
- Collaborating in an electoral college presidential board game
- Acting out how the blood travels through the body

As teachers shared lesson ideas, they jotted down ideas that they might consider using for future lessons.

Lesson ideas for an IPI code of six, including more familiar lessons such research, hands-on learning, and problem-based learning, seemed to be easier for the teachers to verbalize. The teachers' suggestions included the following:

- Conducting a Pythagorean theorem scavenger hunt
- Creating a math game
- Creating poetry
- Writing stories
- Creating a mystery animal based on scientific facts from other animals
- Creating art to visualize a story
- Researching a topic of interest
- Participating in a model Congress

As I listened to the dialogue among the teachers, I saw the excitement rise as they came up with more ideas. I had researched some interesting websites that offered creative lessons. This served as a springboard for other teachers, who shared websites they had discovered. From my field notes, websites that drew a positive response from teachers included: Edutopia, www.edutopia.org; PBS for Teachers, http://www.pbs.org/teachers/; Outta Ray's Head, http://home.cogeco.ca/~rayser3/; and Education World, http://www.education-world.com/a_lesson/. The teachers who had felt uncomfortable with the categories of five and six during the previous meeting appeared to have reached a level of understanding after the faculty collaboration.

Mrs. Douglas, the principal, continued to carry out the IPI process between meetings, discussing the numeric codes with teachers and offering examples from her personal experience. During a faculty workshop day, Mrs. Douglas created charts for

each numeric code. She and the teachers circulated from chart to chart, armed with Post-It notes to leave their examples of lessons that corresponded with the IPI category. To encourage faculty engagement, she created catchy phrases, referring to the "Fabulous Fives" and the "Stunning Sixes." As the IPI researcher, I appreciated her interest and support. Because she believed strongly in the IPI process, the faculty willingly participated in the process.

Sixth Focused Walk

The sixth and final focused walk of the two-year action research study took place on March 24, 2009. I followed the same protocol and rubric as I had for the previous five walks. I began the coding process at 8:30 AM and finished at 2:30 PM, for a total of 132 classroom observations. At the conclusion of the school day, I typed the observation codes into an Excel spreadsheet, creating three pie charts—core, non-core, and combined classes—that depicted the learning experiences I had observed during my walk. I met with the KMS staff to review the data at their regularly scheduled faculty meeting on April 2, 2009.

Once again, I provided the faculty the IPI protocol sheet and the IPI rubric and the group reviewed the handouts as I verbalized key points. However, this meeting would be a bit different. Since this was my final meeting, I wanted to show the faculty the progress of our two-year study. I first presented the pie charts from the last focused walk for the teachers to review and discuss.

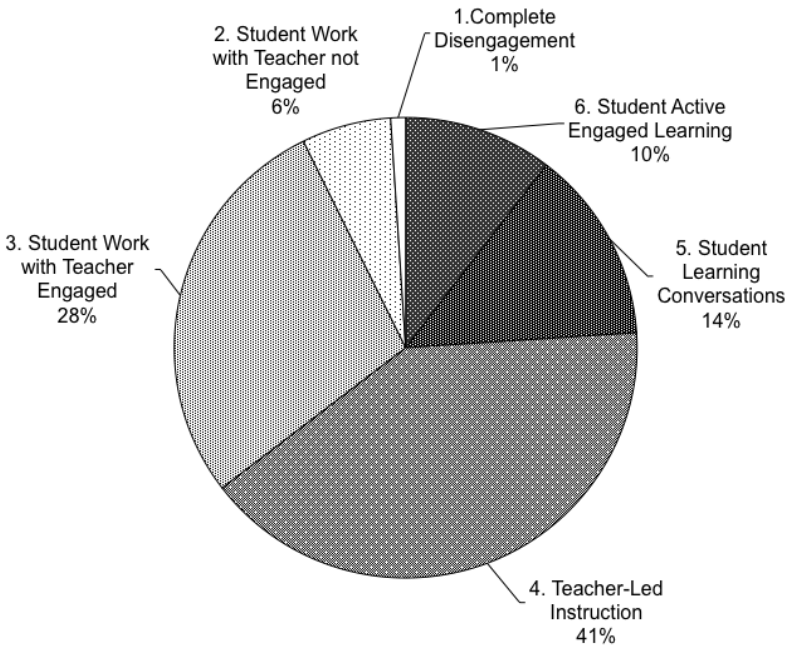


Figure 19. Sixth focused walk, core classes.

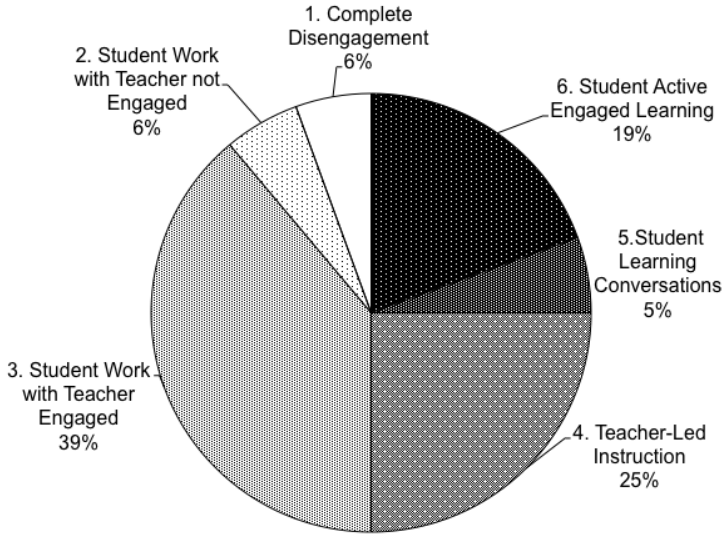


Figure 20. Sixth focused walk, non-core classes.

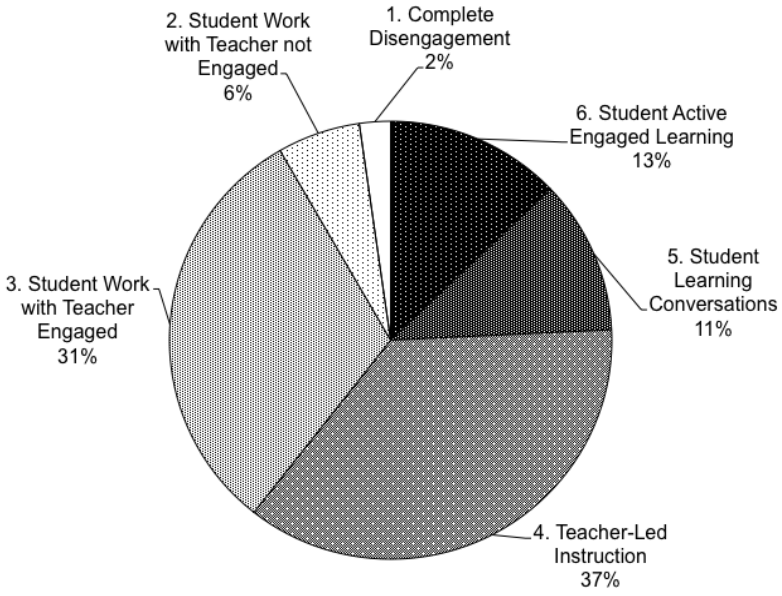


Figure 21. Sixth focused walk, all classes.

The teachers noticed that the categories of five and six had gone down from the previous walk. Several reasons were offered in the group discussion: teachers were busy with ISAT and MAP tests and did not have time to "be creative;" the end of the year was getting close and teachers still had a lot of material to teach, so many of the lessons were based on memory work for the students; the teachers were so used to the IPI process that they just were not thinking about it enough.

I recalled from a recent IPI training with Dr. Valentine that he had said sometimes code five and code six lessons went down when teachers were preparing for standardized tests. As researcher, I wondered if one explanation for fewer observations of categories 5 and 6 was because of the proximity of the ISAT tests.

I had created a PowerPoint to show the teachers our journey over the past two academic years. I felt that it was important for them to see the first focused walk, all

classes, shown next to the final focused walk, all classes. I created a handout for the teachers, showing the pie charts for all classes in the first and final focused walks (see Figure 22). Teachers were amazed to see a large increase in student-engaged learning experiences (codes five and six) as well as a large decrease in student seat-work (codes two and three).

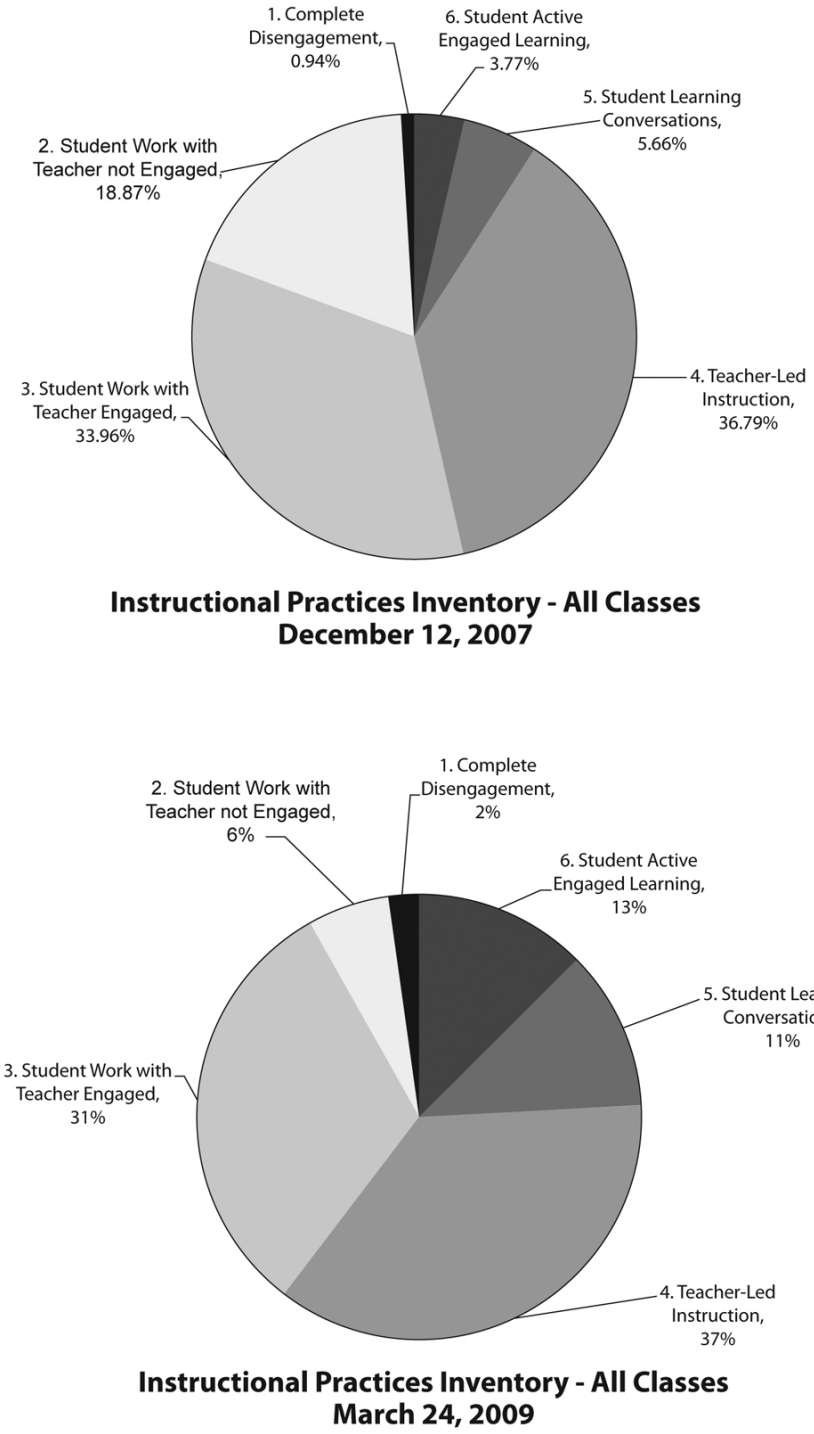


Figure 22: Comparison of First and Final Focused Walk

As teachers reviewed the pie charts (Figure 22), I recorded the following comments in my field notes:

- Look how much categories five and six (higher-order, deeper thinking) have gone up in two years.
- I think we tried to change our lessons. I really thought about mine, and I think the pie charts show that we're thinking
- Complete disengagement has gone up a little, but 2% is still good.
- Category twos (seat work without teacher engaged) have gone down a lot.
- Look at the fours (teacher-led instruction). They've stayed the same.

I was impressed that the IPI process had served, metaphorically, as a mirror, allowing teachers to look closely at the kinds of learning experiences students encounter within a school day. Teachers reinforced that they were "thinking," and some teachers were changing their lessons because of what they had learned.

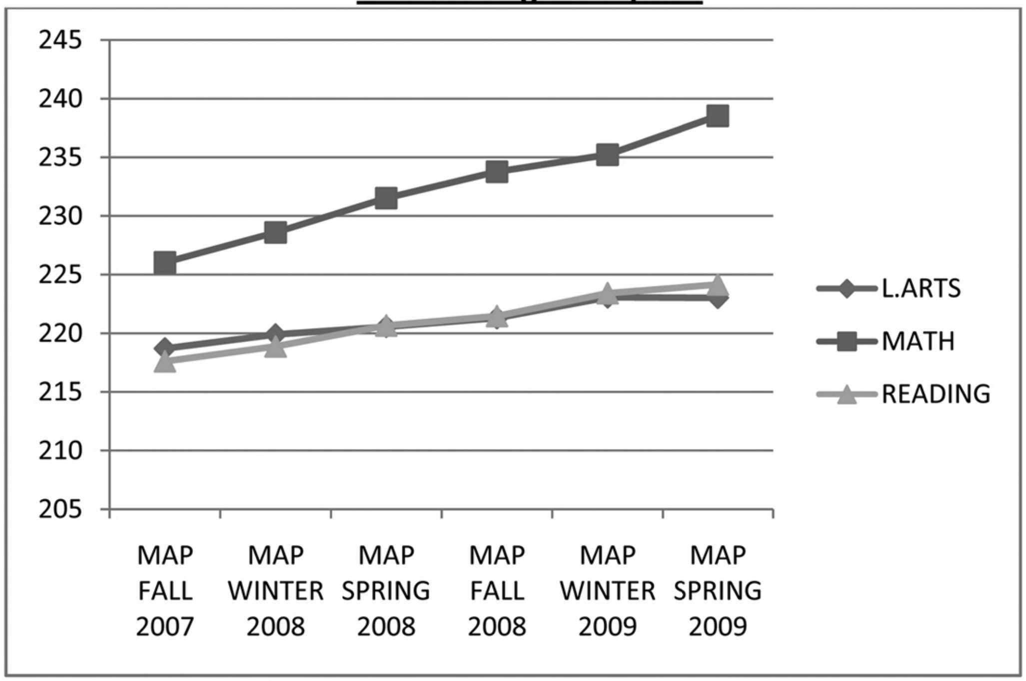
To further reinforce the affects of the IPI process, I created a handout that showed the progression of the ISAT and MAP tests for students in the class of 2013. See Tables 4 and 5 for a summary of the middle school scores for ISATS and MAP testing. As shown on the line graphs, both MAP and ISAT scores consistenly improved over the two-year study.

Table 4

Summary of middle school MAP scores

Middle School Class of 2013 Test Scores

MAP Averages Graphed



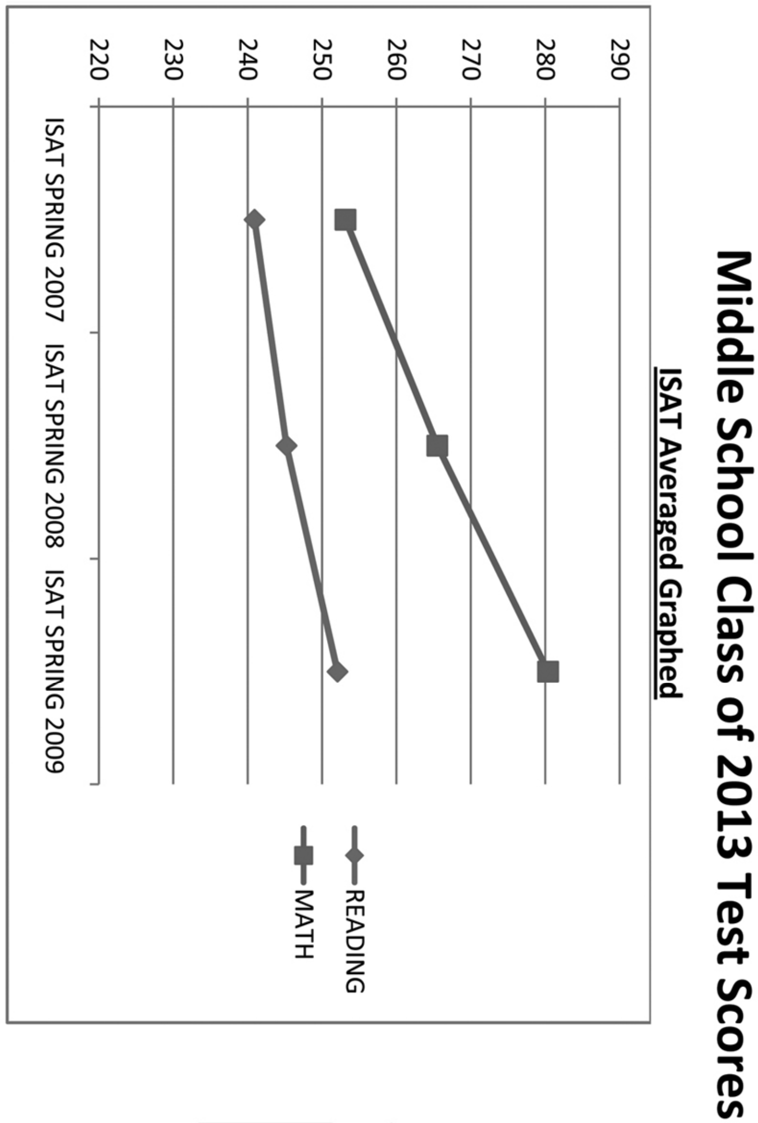
PERCENT INCREASE		
MAP SCORES		
L.ARTS	MATH	READING
1.98%	5.53%	3.01%

MAP Averages

MAP FALL 2007			MAP WINTER 2008			MAP SPRING 2008			MAP FALL 2008			MAP WINTER 2009			MAP SPRING 2009		
L.ARTS	MATH	READING	L.ARTS	MATH	READING	L.ARTS	MATH	READING	L.ARTS	MATH	READING	L.ARTS	MATH	READING	L.ARTS	MATH	READING
218.696	226.039	217.603	219.886	228.601	218.873	220.547	231.520	220.655	221.289	233.765	221.456	223.059	235.221	223.412	223.020	238.539	224.152

Table 5

Summary of middle school ISAT scores



ISAT Averages

ISAT SPRING 2007		ISAT SPRING 2008		ISAT SPRING 2009	
READING	MATH	READING	MATH	READING	MATH
240.933	253.159	245.235	265.500	252.083	280.377

PERCENT INCREASE	
ISAT Scores	
READING	MATH
4.63%	10.75%

As teachers reviewed the line graphs from Tables 4 and 5, I recorded the following comments in my notes:

- Boy, math really went up!
- Reading went up, but not as fast as math.
- All three areas are showing improvement.
- We focused on reading and math and the line graph shows that.
- Wow! Look at our scores! We need to keep this up!

The teachers showed visible signs of excitement as they collectively reviewed the improved ISAT and MAP scores. Math, reading and language use showed marked improvement, with a dramatic increase in math scores. These comments are representative of the responses from the faculty. At my final faculty meeting for the IPI, the teachers appeared to be excited by the results of the data. They carefully looked at the charts that I provided and voiced approval with the students' gains on the ISAT and MAP tests. The teachers expressed a desire to continue the IPI in the future. As researcher, I applauded their efforts and their desire to continue to use the IPI process.

Overview of the Data

Through the collaborative efforts of the faculty and under the transformational leadership of their principal, KMS engaged in a two-year study, implementing the IPI. Teachers worked together to make sense of the IPI Rubric, discussing and implementing the different levels for coding. Together, faculty members talked in small group settings and the whole group setting to understand and implement the merit of the coding system used in the IPI.

Table 6 shows the average percentiles for the levels of engaged learning for the six focused walks during Phase One and Phase Two. The table displays significant increases in engaged learning experiences over the two-year study.

Table 6

IPI Score Summary of Middle School

IPI Score Summary of Middle School

IPI Coding	Data collected 12/12/07	Data collected 2/21/08	Data Collected 4/28/08	Average for Phase One
(6) Student Active Engaged Learning	3.77%	15.57%	17.32%	12.22%
(5) Student Learning Conversations	5.66%	16.39%	18.11	13.39%
(4) Teacher Led Instruction	36.79%	37.70%	29.92%	34.80%
(3) Student Work w/Teacher Engaged	33.96%	21.31%	31.50%	29.92%
(2) Student Work w/o Teacher Engaged	18.87%	5.74%	3.15%	9.25%
(1) Student Disengagement	0.94%	3.28%	0%	1.41%
(5-6) All Higher Order Learning	9.43%	31.96%	35.43%	22.52%
(2-3) All Student "Seatwork"	52.83%	27.05%	34.65%	38.18%
(4-5-6) Teacher Led Instruction & Higher	46.22%	69.66%	65.35%	60.41%
(1-2-3) Disengaged & Student Seatwork	53.77%	30.33%	34.65%	39.58%

IPI Coding	Data Collected10/16/08	Data Collected 1/29/09	Data Collected 3/24/09	Average Phase Two
(6) Student Active Engaged Learning	22.22%	22.39%	13%	19.20%
(5) Student Learning Conversations	23.08%	10.45%	11%	14.84%
(4) Teacher Led Instruction	30.77%	39.55%	37%	35.77%
(3) Student Work w/Teacher Engaged	17.09%	25.37%	31%	24.49%
(2) Student Work w/o Teacher Engaged	4.27%	0.75%	6%	3.67%
(1) Student Disengagement	2.56%	1.49%	2%	2.02%
(5-6) All Higher Order Learning	45.30%	32.84%	24%	34.05%
(2-3) All Student "Seatwork"	21.36%	26.12%	37%	28.16%
(4-5-6) Teacher Led Instruction & Higher	76.07%	72.39%	61%	69.82%
(1-2-3) Disengaged & Student Seatwork	23.92%	27.61%	39%	30.18%

IPI Coding	Difference between Phase One and Phase Two
(6) Student Active Engaged Learning	6.98%
(5) Student Learning Conversations	1.45%
(4) Teacher Led Instruction	0.97%
(3) Student Work w/Teacher Engaged	-5.43%
(2) Student Work w/o Teacher Engaged	-5.58%
(1) Student Disengagement	0.61%
(5-6) All Higher Order Learning	11.53%
(2-3) All Student "Seatwork"	-10.02%
(4-5-6) Teacher Led Instruction & Higher Order	9.41%
(1-2-3) Disengaged & Student Seatwork	-9.40%

The data in Table 6 show that from the end of Phase One to the end of Phase Two, I observed that lessons that used higher-order, deeper thinking increased by 11.53%. Students "seatwork" decreased 10.02% in the same time period. Using the IPI, KMS showed a marked improvement in engaged learning experiences while also demonstrating a stark decrease in the use of worksheets and passive learning activities.

When the first focused walk in 2007 is compared to the study's final focused walk in 2009, the percentages are even more dramatic. From the first to the final focused walk, student-engaged learning experiences (codes five and six) increased from 9.43% to 24%. Over the course of the two-year study using the IPI process, student-engaged learning experiences had more than doubled. The KMS "seatwork" learning experiences also dramatically decreased (codes two and three). During the first focused walk, 52.83%, or more than half of all observations, were passive learning lessons with students completing worksheets, study guides or other forms of seatwork. However, by the final focused walks, the percentage of code two and code three lessons had decreased to 24%. Certainly a percentage of seatwork is necessary. Students must take tests and answer questions. However, data show that students who are frequently engaged in higher-order, deeper thinking will increase their learning and perform better academically (Valentine, 2009).

The collaborative efforts of the faculty led to a school-wide change in the students' learning experiences. The average number of higher-order learning experiences during Phase One focused walks was 22%. The average of higher-order learning experiences during Phase Two focused walks was 34%, an increase of 12%. In addition,

the scores for the ISAT and the MAP tests showed consistent improvement over the two-year study.

Other Contributing Factors During the Study

While the faculty engaged in the Instructional Practices Inventory, KMS was involved in other areas of school improvement. While I will discuss the other areas of school improvement that occurred during the two-year study, I strongly suspect that the IPI was the greatest factor in improving student learning experiences, encouraging faculty collaboration and in increasing student achievement test scores. That being said, as researcher, I realize that there were many other components that contributed to the success of KMS. The first area of improvement was the faculty's collaborative effort to assist middle school students navigate societal and peer pressures. Mrs. Douglas incorporated into the school's schedule "Monday Morning Problem Solving," a time for students to talk about personal situations with members of the staff. Mrs. Douglas said that the Monday sessions provided "another way for kids to have a voice."

Kaskaskia Middle School's counselor, Mrs. Isaacs (a pseudonym) incorporated the skills of high school students who were members of a school organization called Life Savers. Life Savers are students who choose to serve as peer counselors and positive role models. With Mrs. Isaacs as their faculty advisor, Life Savers students served as mentors for the middle school students, encouraging the seventh and eighth graders to make good choices about sexuality, safety, alcohol, and drugs. In an e-mail conversation me, Mrs. Douglas said that the combined efforts of Monday meetings and Life Savers mentors provided middle school students a voice that "impact[ed] [the students'] attitude towards school and ultimately student achievement."

Mrs. Douglas also stated that "the respect we now give testing" was a positive force for both the ISAT and the MAP tests. She continued, "Our kids are expected to learn material and I believe all teachers now teach it. Teachers are excited when their state score goes up."

In the e-mail discussion, Mrs. Douglas credited the importance given to MAP testing as another critical component in the school's academic growth. Mrs. Douglas said, "MAP has importance with most kids as we help them watch their growth and encourage them to set higher goals." MAP testing for some began in the primary schools. Mrs. Douglas said that since MAP testing has expanded to include the middle school, students are becoming accustomed to watching their progress, challenging themselves to improve with each test.

When the class of 2013 came to KMS as seventh graders, the school faculty had decided that KMS's vision statement would be "Doing What's Best for Kids." The statement was on the students' agendas, the school's letterhead, and the school walls. Mrs. Douglas said the guiding statement has been "one of our most effective changes at KMS—a common purpose." Mrs. Douglas also affirmed the KMS faculty, stating, "Our teachers have done a lot to help our kids improve, and they themselves have improved in the process. That's what makes great teachers."

Summary

After two years of implementing the IPI process at KMS, I have documented a substantial increase in student learning experiences that incorporate higher-order, deeper thinking skills, as well as a significant decrease in student learning experiences that focus

on student seatwork. In Chapter Six, the final chapter, I will reflect on the study and the possibility of future studies using the IPI process.

Chapter Six: Reflections

"The principle goal of education is to create men and woman who are capable of doing new things, not simply repeating what other generations have done." Jean Piaget (1896-1980)

Reflections from the Study

The purpose of this action research study was to determine if there appeared to be a positive relationship between student-engaged learning and faculty collaboration using the IPI. In addition, I hoped to find a relationship between student achievement scores and the implementation of the IPI. While KMS experienced several initiatives during the two-year study that were intended to improve the students' educational experiences, the IPI process was a major study that focused on increasing faculty collaboration, improving the level of student learning experiences and increasing student achievement. For the purpose of my study, I posed three questions:

1. Do IPI observational data foster individual and whole-faculty teacher reflection and problem solving?
2. Do teacher reflection and problem solving, while using the IPI process, foster instructional change that increases student-engaged learning and higher-order, deeper thinking?
3. If there are instructional changes, are there relationships among those changes that can be linked to the IPI process and student achievement?

1. Do IPI Observational Data Foster Individual and Whole-Faculty Teacher Reflection and Problem Solving?

From my two-year study at KMS, I discovered that the IPI observational data did foster individual and whole-faculty teacher reflection and problem solving. I observed teacher reflection and problem solving as teachers studied the IPI process and the data

collected from the six focused walks. As teachers reviewed data from pie charts and line graphs, they discussed ways to improve learning experiences at the middle school. The qualitative data from my field notes showed most teachers participated in whole-faculty teacher reflection. In a whole-faculty setting, teachers worked collectively to move their lessons from a code two or three (student seatwork) to a code five or six (higher-order, deeper thinking). Throughout the two years of the study, I not only collected field notes, I received e-mails and notes from teachers who shared their thoughts about the IPI process. One teacher shared, "[Another teacher on my team] and I do quite a bit of collaborating and we talked about what [code] we were doing when we planned our lessons." Another teacher said, "[IPI] definitely made a difference in the way I planned my lessons." Most of my communications from the staff reflected the teachers' desire to continue to implement the IPI in their lesson plans.

During the study, I asked the teachers to e-mail their thoughts about IPI. The majority of the e-mails that I received expressed affirmation for the IPI process. However, I did receive three negative e-mails that I would like to address here. One mildly-negative e-mail came from a staff member who felt that the focused walk data should be presented in e-mails rather than collaborative meetings. While this would certainly save time, this form of disseminating the data would be counterproductive to establishing a collaborative culture. I observed much of the collaborative ideas came from brainstorming and group discussion, or emergent dialogue. This would be difficult to achieve using e-mail. The second e-mail suggested that the focused walks occur at random rather than scheduled times. This teacher felt that teachers altered their lessons to encourage students to use higher-order, deeper thinking. That point was a concern

addressed by Dr. Valentine in Level II IPI training that I attended. He said that while some teachers might initially change their lessons, if a school continues using the IPI, the teacher will eventually begin to think about creating lessons that engage students in learning. In retrospect, I wish I had addressed this issue more strongly during the faculty's collaborative times. I would suggest to future researchers to address teachers adapting their lessons only for coding days. The third negative e-mail said there were "too much data" and complained that the short visits during the focused walks were "not long enough to fully understand teachers' styles and methods." Since this is the era of data-driven decisions, I feel compelled as a researcher to continue to use data to make appropriate educational decisions.

As far as not understanding the teachers' styles and methods, I realized I had not adequately communicated to this teacher that the snapshot of the school provides a picture of the students' learning experiences, not the teachers' styles. However, I do see the teacher's point; students' learning experiences are often a direct result of the lesson presented by the teacher. However, staying in the room longer to see "something different" would not change the code, since the IPI protocol stresses that the coder must "code the initial category observed, rather than decid[e] what learning experience to code if the students move from one experience to another during the observation" (p. 3).

All in all, I felt gratified that the vast majority of the teachers had responded favorably on the IPI process. I realize that not everyone can be expected to agree with the value of an educational process; I have respect and gratitude for the views and opinions from all of the staff members who willing shared with me their thoughts.

2. Do Teacher Reflection and Problem Solving, while Using the IPI Process, Foster Instructional Change That Increases Student-Engaged Learning and Higher-Order, Deeper Thinking?

From my observations of the data collected from my focused walks, the answer is yes. In my two-year study, the student-engaged learning experiences, codes five and six (higher-order, deeper thinking) increased 33.82% from the first walk to the final walk. To determine whether or not students were engaged in higher-order, deeper thinking, I first looked at what the students were doing. Often I quietly talked with them about their learning experience, looking to see if the students were analyzing or synthesizing, or if they were constructing or creating.

Some student seatwork incorporated higher-order thinking. For instance, a student composing a poem or creating a thoughtful essay would be using higher-order thinking skills. Student seatwork that did not incorporate higher-order, deeper thinking—codes two and three— were often completing short answer worksheets or completing an assignment that called for recall of facts. Learning experiences that were coded two or three decreased by 27.78%.

In the era of NCLB, such emphasis is placed on standardized testing that sometimes educators lose sight of the importance of learning experiences in the classroom. The IPI process encourages that learning experiences improve, which, in turn will be reflected in the student achievement scores. Hence, learning becomes the primary goal and achievement scores are secondary. Valentine (2007b) stated:

> The IPI process presents data important for understanding whether school improvement initiatives have influenced student learning. State standardized tests

> are too often the only empirical measure of the impact of school improvement initiatives. Data from the IPI observations and profiles of student-engaged learning provide observable, objective, quantifiable measures of student engagement. (p. 2)

The two-year study provided data that showed a consistent increase in classroom experiences that encouraged the students to engage in higher-order, deeper thinking. The study also provided data that showed that lessons that used worksheets to recall data or information decreased during this study. The study at KMS parallels Dr. Valentine's research, as shown in Appendix F. In Dr. Valentine's Project Assist study, schools that were considered to be highly successful have higher percentage of higher-order learning experiences. Successful schools for this study were selected by an "analysis of multiple forms of school data" (Valentine, 2005, p. 11).

3. If There Are Instructional Changes, Are There Relationships among Those Changes That Can Be Linked to the IPI Process and Student Achievement?

Using data from the ISAT and MAP standardized tests, I discovered that the students at KMS demonstrated significant growth. Based on my research, I contend that the instructional changes can be linked to the IPI process and student achievement. In my literature review in Chapter Two, I discussed that the data reflect that standardized test scores go up when students are engaged in learning. My field notes offer qualitative data as evidence for this question. In faculty discussions, one teacher told me, "The IPI made me more aware of how I teach and what I need to do to improve student involvement. I am constantly looking into ways to get my students more engaged in the classroom." Another teacher stated, "As a teacher [the IPI] made me start to analyze the levels of each

activity and lesson. It made me look for a balance and realize [the importance of] a mix of the top levels. It also confirmed my thoughts that student discussions are important." These comments were indicative of the many positive responses from faculty discussion and e-mails. From my field notes, e-mails, communications with the teachers, and focused walks data, I contend that, when student achievement increased, a strong determinant for this increase was the school's implementation of the IPI process.

Testing at the Middle School

Anfara, Andrews, and Mertens (2005) made a strong argument for the middle school being perceived as the problem years in education. In the Third International Mathematics and Science Study of 40,000 students across 500 schools, the study revealed that American students gained ground in math in fourth grade but lost ground in eighth grade (p. 374). Anfara et al. stated that "the release of the TIMSS report provided the fuel to ignite dissatisfaction with America's middle schools" (p. 375). Anfara and colleagues also point to The National Center on Education and the Economy, which referred to the middle years as the academic "wasteland" of the educational system (p. 375). The Southern Regional Education Board dubbed the middle grades the "weak link" in K–12 education, stating that middle schools traditionally have "lower standards for middle graders than the rest of the nation's students" (Cooney, 1998, p. 5).

While the data for many middle schools look bleak, the two-year study at KMS contradicted this literature. From the KMS students' baseline ISAT scores in 2007 to this study's final scores in 2009, math scores increased 10.63% and reading scores increased 4.63%. In 2009, all subgroups made AYP—including the special education subgroup that had not made AYP in 2008. As I reflected on this two-year study, five themes emerged

that contributed to the findings in this study. The three themes listed below were positive factors and will be discussed later in this chapter:

- Leadership
- Collaboration of the faculty
- Simplicity of the IPI process

The final two themes, listed below, presented challenges in the study. I would like to address these themes first:

- Hybrid middle school
- Time pressure

Hybrid Middle School

Though I believe the study's positive factors far outweighed the study's challenges, the negatives must be addressed. The traditional middle school has teams, advisories, and daily team planning time for the teachers. While KMS had teams and advisories, the teams had only one joint planning time each week. The teams lost daily team time because of financial cutbacks. Because of the loss of daily team time, several teachers referred to KMS as a "hybrid middle school." At the time of this writing, school funding is critically low; monies for team time are not currently available. Future prospects are bleak, since the state of Illinois is currently in what many call the worst financial crisis in its history. "Even after making plans to lay off 2,600 state employees and deeply slashing health care for the poor and social services, the 2010 budget still carried an estimated 5.5 billion dollar deficit" (Gauen, 2009). However, because teachers collectively voiced the need to bring back team planning time, and the lack of team time proved to have a negative impact on the IPI study, I felt I should address the problem.

In a national study of 1,400 middle school principals, team planning time for middle school teachers was studied. As a result of the data, educational researchers Hackmann et al. (2002) stated:

> In addition to individual preparation time, providing common team planning time is essential to ensure that teams will function effectively and will demonstrate gains in student achievement . . . If common planning time is not made available, then teachers are forced to meet before school, after school, and over lunch, making it very difficult to coordinate team activities. (p. 5)

In my dialogue with the teachers, they reinforced their purposeful use of the team planning time. One teacher said, "When we had team planning time, we discussed our students as individuals. We planned together to help redirect a student, and often used that time for parent conferencing as a group, getting everyone on board with an action plan to help the kid be successful." Another said, "We only have team time once a week and had to cover other things. If we were given our team time back, then I feel there would be much more time to really look deeper into the IPI process. In fact, I think it should be a mandatory process if we had team time, because I found it to be very informative and worthwhile." In each interview, the teachers reiterated the need for daily team time to be built into their schedule, so they could reinforce the tenets of the IPI and collectively work with individual students. The collective e-mails from the KMS faculty voiced their desire to leave the "hybrid middle school" behind and become a true middle school with advisories and daily planning time again.

Lack of Time

The lack of team time led directly into the lack of time available for the researcher

to present, and the faculty to discuss, the data from the IPI. KMS had a monthly faculty meeting, scheduled for the first Thursday of each month. At this meeting, the administration and faculty discussed several important school issues. I was usually provided approximately 30 minutes to discuss IPI at these meetings. This was a generous amount of time when one considers that I received half of the faculty's meeting time. However, to follow the IPI process guidelines, I would have needed twice this time. For instance, the following is an outline from Dr. Valentine for an optimum schedule of the first IPI faculty meeting.

The minimum time Valentine suggests for the initial meeting is 65 minutes, with notes in the IPI manual stating, "Time needed is from approximately 60 minutes to 120 minutes, depending on faculty size and details of discussion. . . . This first faculty session can be longer if time is available" (Project ASSIST, 2006, p. 1). After the first session, Dr. Valentine suggests 60–120 minutes for the remaining faculty work sessions, allowing the faculty time to transition from "an understanding of the IPI categories to a posture of goal/objective-setting and a commitment to professional development, growth, and change to accomplish the goals/objectives" (p. 1). With the Illinois District holding one 60-minute faculty meeting each month, the requirements of the IPI were outside the boundaries of the faculty's available meeting time.

In my field notes and e-mails from the teachers, several said that the meeting time for the IPI data was lengthy but worthwhile. Mrs. Douglas and I also discussed the time commitment to the IPI process and tried to streamline the data presentation and collaboration time. Most teachers voiced that having team planning time would have been conducive to the IPI process. One veteran teacher stated, "The type of discussion

that you were trying to get at the faculty meeting would have been much more effective at a team meeting with a smaller number of teachers. And this is the kind of stuff that we DID talk about when we had 'kid time' (we discovered after it was gone that this was a much better title for it because that was truly the focus of the time—kids!)" As I reflect on the process, I would encourage future researchers to work with their districts to provide collaboration time for the teachers.

Leadership from Administrators

With KMS facing two constraints—being a hybrid middle school and having limited meeting time—why was this IPI study so successful? Upon reflection, I believe that the positive leadership my district provided created a foundation for the study to be accepted by the faculty. Superintendent Patrick was very supportive of the IPI process, and when he retired after the first year of the study, Superintendent Richards (a pseudonym for this study) his successor, was equally supportive of the study.

Mrs. Lee (a pseudonym for this study), assistant superintendent for my district, was equally supportive of the study, and assisted Mr. Patrick (a pseudonym) in writing a grant that provided funding to train teachers in the IPI process. Mrs. Lee and Superintendent Richards (a pseudonym for this study) allowed me to present the IPI data to the school board, and this productive meeting enlisted further support for the research study. Mrs. Lee, Superintendent Richards, and Mr. Patrick plan to go through the IPI training in 2009.

Mrs. Douglas, a trained IPI coder and NBCT, was a strong advocate for the study. She worked with me, serving as both mentor and sounding board for the IPI process. The principal's acceptance of the program served as a springboard for me to enlist the

faculty's acceptance. In addition, I observed Mrs. Douglas to be a transformational principal, skilled in the areas of communication and inclusion and educated in the areas of best practices for middle school students.

The district's positive leadership provided me an educational arena that was conducive to positive change. The faculty at the middle school created a welcoming environment for me, with teachers questioning the process, accepting the IPI, and truly working collaboratively to "do what's best" for their students.

My Leadership Role as Facilitator and Researcher

Since I facilitated the study, I will address my leadership skills as well. While I am currently a high school teacher in the district, I have taught at the middle school level in two states and feel equally comfortable at that level. As a teacher who has taught at multiple levels (kindergarten through college), I have a holistic view of the educational process that I feel is both helpful and unique. That being said, when I began facilitating the IPI process, I had several concerns:

1. Would the teachers accept me as researcher and facilitator?
2. Would I be able to facilitate the IPI in a way that this school and process deserve?

First, the teachers and administrators made me feel most welcome at KMS. I was allowed significant time to complete the IPI focused walks and much faculty meeting time was spent on faculty development understanding and reviewing the IPI process and data. I was gratified by the overwhelmingly positive response I received from teachers, and received positive e-mails from a number of teachers. One seasoned teacher said, "the data from the focused walks was interesting to see the comparisons between [walks].

Handouts were good - could take them with us and refer to them later if we want." A young teacher said, " I really liked how you presented the data and encouraged us to talk about it. Now I really think about the codes when I write my lessons." Even one of the two negative e-mails stated, "You did a good job for most teachers."

As far as properly facilitating the IPI process, I feel comfortable that I accomplished that goal. I frequently reviewed the IPI training material from my Level I and Level II trainings. I attended additional workshops with Dr. Valentine so I could become more fluent in the IPI process. Additionally, whenever I had concerns about codings, I was able to draw on the expertise of Dr. Valentine and Mrs. Douglas. In addition, the data from the study provided positive results for faculty collaboration, student learning experiences and student achievement – all outcomes from other schools that used the IPI process (Valentine, The Value of Collaboration, 2009).

Collaboration

When Dr. Valentine trained coders for the IPI process, he created the following scenario for us to visualize (The Value of Collaborative Conversation, 2009):

> Situated in the context of a faculty work session, with one or more facilitators leading the faculty study of the data and related discussions, the following visual image depicts the collaborative conversations using IPI codes. Note that this process of collaborative conversations fits with the existing knowledge about creating professional community and organizational learning. Through the deeper, analytical conversations the faculty can begin to develop a higher level of collective commitment. From meaningful, collaborative work, trust is enhanced and a feeling of support and confidence in the use of best (better) practices

evolve, thus producing a higher level of faculty efficacy. As better practices evolve, students become more motivated learners and their commitment and motivation to study/learn increases. As that happens a student's learner efficacy increases and that links to increased learning and achievement data. (p. 1)

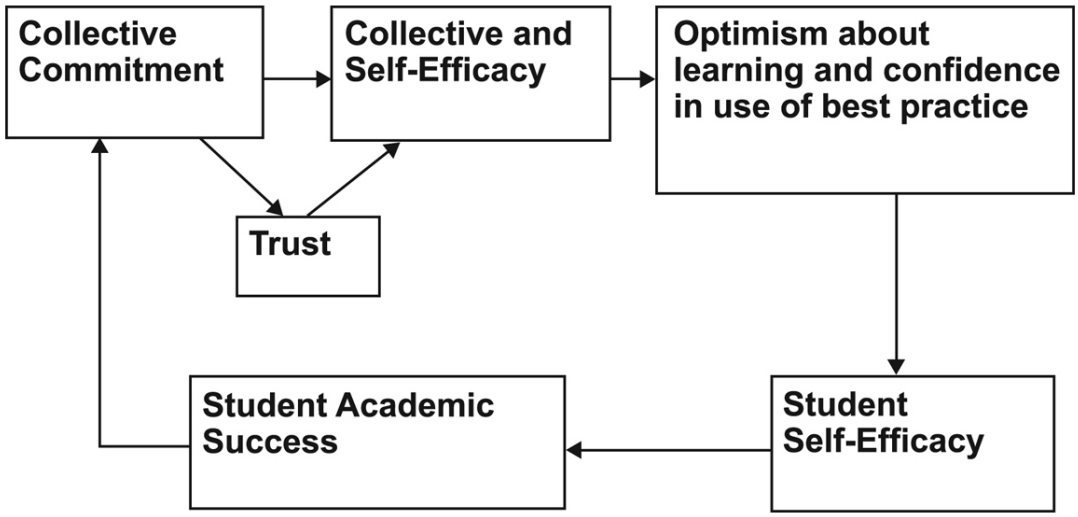


Figure 23. Collaboration
Note. From MLLC, The Value of Collaborative Conversation by Jerry Valentine, 2009, p. 1. Copyright 2009 by MLLC. Reprinted with permission.

The scenario helped affirm that a collaborative environment was essential to the IPI process. Dr. Valentine illustrated the collaborative cycle in Figure 23. Collaboration leads to collective commitment, teacher efficacy and academic success. Vice Principal Barry Thomas, a seasoned and respected administrator in southern Illinois, presents an Administrative Academy Workshop for administrators. When I worked toward collaboration with teachers using the IPI process, I recalled his wise words from this workshop: "If you think you are leading and no one is following, you're just taking a walk! Collaboration is the key to success for every school" (Thomas, 2008).

Collaboration is also a critically important component to the success of the IPI process.

I received e-mails from KMS teachers who affirmed the successful collaboration of the KMS faculty. One teacher wrote, "the teachers' meetings where we discussed the walks and the data were really interesting. We saw how our results changed from one focus walk to the next. Even those teachers opposed to using the meeting time to share data must have started to think about student engagement." One teacher who struggled with the time commitment to the IPI process shared, "I must admit, I dreaded going to the [collaborative] meetings, but after I was involved in reading the data, I found it very interesting." Another teacher wrote, "the data helped our school see the levels of engagement of students throughout our building, so it help[ed] us to establish school-wide goals. We may even be able to see how it affects student achievement on standardized tests in the future." A veteran teacher wrote, "you facilitated the meetings well and helped us to draw our own conclusions."

Of the 30 plus e-mails and communications that I received, every one mentioned the loss of team time as detrimental to the students' best interests. One seasoned teacher wrote:

> Team time was taken away from KMS about 4 years ago. As teams, we all give up prep time every week to try to meet the needs of our students. The loss of team time hurt the process of catching the kids who are falling through the cracks. It also hurt the daily connection time with each other for discussing teaching.

The "discussing teaching" mentioned in the e-mail is at the heart of collaboration.

The most successful schools "created opportunities for teachers to collaborate," taking "collective—not just individual—responsibility for student learning" (Newmann

& Wehlage, 1995, p. 10). One of the strengths of the IPI process is its ability to lead teachers to collaborate in small groups and a whole group setting. After every focused walk, the teachers met with the researcher to look at the pie charts and discuss what the story the pie charts told. The old saying "a picture is worth a thousand words" is appropriate for the IPI, because the teachers were given a picture of a school day and asked if they liked what they saw. Together, teachers discussed why we had so many code fours (teacher-led learning experiences). Together, teachers looked at the high percentage of time spent on seatwork (codes two and three) and discussed ways to move those learning experiences to a higher level. The inclusion of the IPI process (every student learning experience was observed multiple times), coupled with the safety of the coding process (every classroom code was anonymous), provided a safe environment for faculty collaboration and school growth.

The Simplicity of the IPI Process

As I reflect on the past two years of this study, I think the simplicity of the IPI process was a positive factor in my research. I was initially drawn to the IPI because it was not only based on years of data, it was just good common sense. When students are asked to use higher-order thinking—to stretch their abilities—we give them the gift to problem solve. While a certain amount of class time must be spent memorizing factual information, schools also must address students' developing critical thought processes. The simplicity of "creating a picture of the school" by using a six-step coding process interested me, because I knew I needed to get the faculty to support the process. A simple, common-sense process that was supported by data would intrigue the teachers and offer positive possibilities (Valentine, 2007b). Prior to this study, the IPI process was

"documented formally in other research projects," including a national study of leadership for the National Association of Secondary School Principals (Valentine, 2007b, p. 5). Research studies affirm the value of IPI process for school improvement, teacher collaboration, and increasing student-engaged learning experiences in the classroom. The simplicity of the IPI process is shown in Table 6, where coding categories have easy "look-fors," with three broad categories that provide a simple format.

Table 7

IPI categories and common "look-fors"

Instructional Practices Inventory Categories

Broad Categories	Coding Categories	Common Observer "Look-Fors"
Student-Engaged Instruction	**Student Active Engaged Learning (6)**	Students are engaged in higher-order learning. Common examples include authentic project work, cooperative learning projects, hands-on learning, problem-based learning, demonstrations, and research.
	Student Learning Conversations (5)	Students are engaged in higher-order learning conversations. They are constructing knowledge or deeper understanding as a result of the conversations. Common examples are cooperative learning, work teams, discussion groups, and whole-class discussions. Conversations may be teacher stimulated but are not teacher dominated.
Teacher-Directed Instruction	**Teacher-Led Instruction (4)**	Students are attentive to teacher-led learning experiences such as lecture, question and answer, teacher giving directions, and media instruction with teacher interaction. Discussion may occur, but instruction and ideas come primarily from the teacher. Higher order learning is not evident.
	Student Work with Teacher Engaged (3)	Students are doing seatwork, working on worksheets, book work, tests, video with teacher viewing the video with the students, etc. Teacher assistance, support, or attentiveness to the students is evident. Higher-order learning is not evident.
Disengagement	**Student Work with Teacher not Engaged (2)**	Students are doing seatwork, working on worksheets, book work, tests, video without teacher support, etc. Teacher assistance, support, or attentiveness to the students is not evident. Higher-order learning is not evident.
	Complete Disengagement (1)	Students are not engaged in learning directly related to the curriculum.

Note. From Middle Level Leadership Center, Project ASSIST, by Jerry Valentine, 2005, p. A4. Copyright 2005 by MLLC. Reprinted with permission.

Future Studies and Considerations

Based on this action research study, I believe there are incentives for other schools and districts to study the IPI process. I suggest that a district-wide study, grades K–12, would provide a valuable perspective of student-engaged learning and faculty collaboration. Since the IPI fosters a language using codes to express student learning experiences, I believe it would be valuable to study a district where all teachers are focused on increasing student-engaged learning and faculty collaboration. In light of my experience, I would encourage a future researcher to consider an action research study of the IPI process. When I decided to complete this study, I was not sure what methodology I would use. I initially considered a quantitative study, looking exclusively at achievement test scores. I decided against this, since the qualitative portion of the study is critical to the IPI process. The input of teachers is most valuable, since the IPI process is classroom driven, and teachers control much of the content of their classroom.
I also considered a mixed results study, but realized that if I were going to facilitate and lead the project, I needed a more participant-friendly methodology. Participatory action research provided a methodology that allowed me to be an insider looking at the inner workings of a school in my district. I think if I had begun the study with action research in mind, I would have kept more detailed field notes.

In addition, after seeing a regression in the IPI from the end of the first year to the beginning of the second year, I wish I had provided faculty development for the IPI during the summer months. I would encourage future studies to consider summer professional development to maintain the momentum of the IPI process.

During the course of this study, KMS teachers identified the need for further staff development. The IPI process has served as an instrument of change for KMS. I would encourage KMS to sustain the momentum by maintaining their collaborative communities and working to create lessons that engage students in deeper, higher-order learning. I am encouraged that this district has seen the validity of the IPI beyond the middle school. Dr. Valentine visited KMS on September 15 and 16, 2009, and trained a group of K-12 teachers and administrators in the IPI process.

I would caution future studies to find released time for the teachers to participate in the IPI process. I was most fortunate to have administrators who released me from class time to complete the focused walks and attend training for the IPI process. The time needed for thoughtful collaboration is significant, but in my mind, well worth the investment. A middle school with sufficient team time would provide an excellent area for the IPI process. Or, if the school does not have daily team time, as in the case with KMS and this study, I believe the researcher should look for a school with strong, positive leadership to help direct and encourage the study.

I spoke with Dr. Valentine about choosing a school for my study and he said effective principals, or transformational leaders, have proven to be key for a successful experience with the IPI. Because of the time commitment necessary from the faculty, an effective principal like Mrs. Douglas will help reinforce the importance of student-engaged learning, provide time for faculty development and reinforce the possible long-term growth from the IPI process.

In conclusion, I am making this information available with the hope that other researchers will implement and study the IPI process at their school or district. As

researcher, I believe the IPI process, used in conjunction with strong leadership and a culture of collaboration, provides a positive instrument of change for schools.

Appendix A

Instructional Practices Inventory
Faculty Data Analysis and Discussion Worksheet

How similar are our two IPI profile data sets. In other words, were the data for "core," "non-core," and "total" different on the second data collection? Were the differences "good" differences, "bad" differences, or "insignificant" differences?

Looking at the two profiles, complete the following reflection by comparing the two sets of profiles.

Comparing the data from both sets of profiles, what changes did we have that were good for student learning? (For each statement, indicate whether you are referring to data from the core, non-core, or total data profiles).	Comparing the data from both sets of profiles, what changes did we have that were not so good for student learning? (For each statement, indicate whether you are referring to data from the core, non-core, or total data profiles).
•	•
•	•
•	•
•	•
•	•

Note. From MLLC Project ASSIST, Jerry Valentine, 2007, p. 7. Copyright 2007 by MLLC. Reprinted with permission.

Appendix B

HIGHLAND COMMUNITY UNIT SCHOOL DISTRICT NO. 5

Serving the Communities of Alhambra, Grantfork, Highland, New Douglas, and Pierron

MARVIN WARNER
SUPERINTENDENT OF SCHOOLS

LYNNE S. NEWTON
ASSISTANT SUPERINTENDENT - INSTRUCTION
TIMOTHY C. BAIR
BUSINESS MANAGER

June 20, 2008

To Whom It May Concern:

I am writing to inform you that permission has been granted to Karen Gauen to conduct doctoral work at Highland Community Schools. Specifically, Karen is free to conduct focused walks, gather and analyze data from the walks, review student test score data, and conduct interviews with staff members at Highland Middle School. Please let me know if you need further verification regarding Karen's parameters in regards to her research work being conducted within our district.

Sincerely,

Marvin Warner

Marvin Warner
Superintendent of Schools

Telephone 618-654-2106 Administrative Offices, 400 Broadway, Highland, Illinois 62249 Fax 618-654-5424

Appendix C

HIGHLAND COMMUNITY UNIT SCHOOL DISTRICT NO. 5
HIGHLAND MIDDLE SCHOOL, 400 BROADWAY, HIGHLAND, ILLINOIS 62249-0149
PHYSICAL ADDRESS: 2813 STATE ROUTE 160
618-651-8800 FAX 618-654-1551

JEANIE PROBST
PRINCIPAL
VINCE HUGHES
ASSISTANT PRINCIPAL

MARVIN WARNER
SUPERINTENDENT OF SCHOOLS
LYNNE NEWTON
ASSISTANT SUPERINTENDENT-INSTRUCTION
TIMOTHY C. BAIR
BUSINESS MANAGER

July 1, 2008

To Whom It May Concern:

Karen Gauen has asked me to write a letter of approval in reference to her IPI (Instructional Practice Inventory) study she is conducting at Highland Middle School for her doctorate work at Lindenwood.

My name is Sharon K. Schmitz and I am a National Board Certified Teacher in the science department at Highland Middle School and currently serve as Vice President of our local teacher's union – Highland Education Association. Through my positions as both a teacher of the school district and a union officer, I hereby offer my permission for Karen to perform focused walks as well as analyze and present her findings to the staff at Highland Middle School. Karen also has my permission to utilize the gathered information, analysis, and discussion input within her dissertation.

Please feel free to contact me via email (sschmitz@highalndcusd5.org) if you should have further questions.

Sincerely,

Sharon K. Schmitz

Sharon K. Schmitz
2003 – NBCT EA Science
VP of HEA

Doing What's Best for Kids

Appendix D

Teachers:

Over the course of this school year and next, Karen Gauen from Highland High School will be visiting our school to help us develop a profile of our students' learning experiences across the whole school. To provide us with that profile, she will be moving in and out of classes. You will always receive prior notification of her visit.

I am sending this note to make you aware of her presence and to ask that you continue your instruction as usual, essentially ignoring her presence. Please do not stop your lessons or class. Continue with what you are doing and just simply ignore her. Karen will move from class to class as quietly and as quickly as possible for the entire school day.

From those observations a school-wide profile of our learning experiences will be developed for us to study and discuss as a faculty. This information will be of great value to us as we prepare our school improvement plans over the next year or so and as we continue our discussions of how to effectively meet the learning needs of our students.

At no time during the process will the observer be making notes about individual teachers. This entire process is designed to create a "whole school" profile of student learning experiences. The observer will be focusing on what the students are doing, not what the teacher is doing. Collecting information about individual teachers is not part of the observation process. Teachers are not identified by name. All observations are anonymous. The purpose of the process is to create for us a composite picture of learning experiences across our entire school.

Karen will also record some of our whole group faculty discussions for the purpose of gathering material for her doctorate. When she refers to a teacher's comment from an audio tape or written observation, she will identify the teacher as Teacher A or Teacher B. No names will be used. The tapes will be destroyed after she completes her dissertation.

Thank you for your patience and understanding of this important process.

Jeanie

APPENDIX E

FIVE YEARS OF ISAT SCORES FOR KASKASKIA MIDDLE SCHOOL

MATH SCORES FOR 8TH GRADE ISATS

Spring 2003 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Math				
KMS	0.5	25.8	51.7	22.0
State	6.3	40.6	37.6	15.5
Low Income				
KMSS	0.0	48.4	45.2	6.5
State	11.3	58.5	26.0	4.2
IEP				
KM***S***	3.7	77.8	11.1	7.4
State	28.8	58.2	11.2	1.8

Spring 2004 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Math				
KMS	4.4	33.5	43.4	18.7
State	5.6	40.0	37.5	16.9
Low Income	L1	L2	L3	L4
KMS	13.5	43.2	32.2	10.8
State	10.3	57.2	27.5	5.0
IEP	L1	L2	L3	L4
KMS	25.0	61.4	13.6	0.0
State	27.2	59.0	11.9	2.0

Spring 2005 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Math				
KMS	3.1	32.4	45.6	18.9
State	5.9	39.7	37.4	16.9
Low Income	L1	L2	L3	L4
KMS	6.4	34.0	46.8	12.8
State	10.7	57.0	27.2	5.1

IEP				
KMS	21.1	63.2	13.2	2.6
State	27.3	57.0	12.9	2.2

Spring 2006 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Math				
KMS	0.0	15.0	55.0	29.0
State	0.0	20.0	53.0	26.0
Low Income				
KMS	2.0	32.0	51.0	15.0
IEP				
KMS	3.0	49.0	46.0	3.0

Spring 2007 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Math				
KMS	0.0	10.0	51.0	39.0
State	1.0	18.0	52.0	29.0
Low Income				
KMS	0.0	17.0	60.0	23.0
IEP				
KMS	0.0	62.0	28.0	10.0

Reading Scores for 8th Grade ISATS

Spring 2003 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Reading				
KMS	0.0	25.2	65.5	9.2
State	0.5	35.8	54.0	9.7
Low Income				
KMS	0.0	50.0	50.0	0.0
State	0.9	53.1	43.2	2.7

IEP				
KMS	0.0	70.4	29.6	0.0
State	2.7	77.8	18.6	0.9

Spring 2004 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Reading				
KMS	0.8	32.0	58.3	8.9
State	1.6	31.0	57.4	9.7
Low Income	L1	L2	L3	L4
KMS	0.0	41.2	55.9	2.9
State	2.9	47.3	47.1	2.7
IEP				
KMS	25.0	61.4	13.6	10.8
State	27.2	59.0	11.9	2.0

Spring 2005 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Reading				
KMS	0.8	19.8	72.1	7.4
State	0.7	26.6	61.3	11.5
Low Income	L1	L2	L3	L4
KMS	2.1	31.9	63.8	2.1
State	1.2	42.0	53.3	3.5
IEP				
KMS	5.3	60.5	31.6	2.6
State	4.0	65.1	29.5	1.4

Spring 2006 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Reading				
KMS	0.0	21.0	74.0	5.0
State	0.0	21.0	70.0	9.0
Low Income				
KMS	0.0	40.0	57.0	2.0

IEP				
KMS	0.0	62.0	38.0	0.0

Spring 2007 ISAT	**Warning**	**Below**	**Meets**	**Exceeds**
8th Grade Reading				
KMS	0.0	11.0	73.0	16.0
State	1.0	18.0	70.0	12.0
Low Income				
KMS	0.0	19.0	70.0	11.0
IEP				
KMS	3.0	55.0	34.0	7.0

APPENDIX F

IPI Data Merged for the Three Broad Themes from Highly Successful and Very Unsuccessful Middle Level Schools

IPI Category	Broad Themes	Highly Successful	Very Unsuccessful	Sig Level
Student Active Engaged Learning	Student Engaged Instruction	32.6	16.2	.046*
Student Learning Conversations				
Teacher-Led Instruction	Teacher Directed Instruction	57.8	61.6	.052
Student Work w/ Teacher Engaged				
Student Work w/ Teacher Not Engaged	Disengage-ment	9.5	22.0	.035*
Complete Disengagement				

Valentine (2005)

Note: Collins, 2009, p. 188, from Dr. Valentine's Project ASSIST. Copyright 2005 by Valentine. Reprinted with permission.

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Vitae

Karen Earhart Gauen, of Highland, Illinois, is a National Board Certified English teacher and administrative intern at Highland High School and a church choir director at First Congregational Church. She received her Bachelor's Degree in Music from Southern Illinois University at Edwardsville, a Master's of Educational Administration from National University, San Diego, California, and earned her Administrative Certificate from the University of California, Irvine, where she also was named a Writing Fellow for the National Writing Project. She has a second master's, in Music Performance, from Southern Illinois University, Edwardsville. She lives with her husband, Patrick, an editor and columnist for the St. Louis Post-Dispatch, and their cat, Gilligan. They are the proud parents of three stellar children. Karen's elder daughter, Bethany Horstmann, is a graduate of SIUE and Saint Louis University. She is married to Ben Horstmann, also a graduate of SIUE. Together, they have two wonderful sons born during this study, Isaac and Jonah, and live in Glen Carbon, Illinois. Karen's younger daughter, Heather, is a graduate of University of Illinois, lives in Urbana, Illinois, and is engaged to fellow U. of I. graduate, Mike Hutches. Karen's son, Chris Stephenson, is a graduate of Washington University in St. Louis and is currently a second year medical student at Southern Illinois University.