

Project ASSIST: A Comprehensive, Systemic Change Initiative for Middle Level Schools

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Abstract:

Project ASSIST (Achieving Success through School Improvement Site Teams) is a school improvement initiative sponsored by the Middle Level Leadership Center, University of Missouri. Center staff members work directly with school leadership teams from Missouri middle level schools using a conceptual design grounded in a “student-centered, content framework” and a “vision-driven, change process framework” to build internal leadership capacity for continuous improvement. The data presented in this paper addressed three broad areas of focus that the overall initiative was established to influence: school culture and climate, pedagogical practices, and leadership. The data were from two ASSIST cohorts, 1996-1998 and 1998-2000. The findings affirm the value of using a “leadership team capacity design” of educating and supporting a nucleus of teachers and the principal to positively impact the important areas of focus analyzed for this paper.

Project ASSIST: Origins and Purpose

Project ASSIST was designed in 1995-96 as a comprehensive, systemic school reform initiative of the Missouri Center for School Improvement (MCSI), a research and service center located in the Department of Educational Leadership and Policy Analysis, College of Education, University of Missouri-Columbia, USA and directed by Professor Jerry Valentine. In 1997 MCSI was transitioned into a new center, the Middle Level Leadership Center (MLLC), to take advantage of Professor Valentine’s extensive work in middle level education and the grants and contracts for MCSI were shifted to the Middle Level Leadership Center. MLLC is also a research and service center with the mission of positively impacting the quality of school leadership and thus the quality of schooling for middle level students (see www.MLLC.org for a discussion of the mission, vision, goals and projects of Center.)

Project ASSIST is the hub of the Center’s school improvement service efforts. ASSIST is an acronym for Achieving Success through School Improvement Site Teams. ASSIST is grounded in the premise that professional development and support provided to a nucleus of teachers-leaders and the principal serving as a school leadership team can translate into school-wide improvement. The conceptual design of ASSIST is based upon two “frameworks” for comprehensive, systemic school improvement. The first is a “student-centered, content” framework that includes the major components of school culture, school climate, pedagogy, leadership, and organizational structure. The second is a “vision-driven, change process” framework that includes defining faculty values/beliefs/commitments, designing a school vision with goals and strategies for accomplishing the vision, and utilizing data to inform the goals and progress toward the goals (Valentine, 2002).

From 1996 through 1998, the first two-year ASSIST cohort of eight elementary schools, eight middle schools, and nine high schools attended bi-monthly work sessions at the university. The sessions were designed

to build the team's knowledge of best educational practice and processes for leading change when they returned to their respective schools. The second two-year cohort of schools began in the fall of 1998 and concluded in the summer of 2000. The second cohort included 12 middle schools from across the state of Missouri. The shift to middle schools only was congruent with the goals of the MLLC and its primary focus on middle level leadership. The findings and discussions presented in this paper are primarily from the 1996-1998 and 1998-2000 cohorts, as those are the only cohorts, at this time, with pre and post data quantitative data.

Schools from the first two ASSIST cohorts represented a cross-section of schools from rural, small town, small city, suburban, and urban communities. The cohorts also included schools with diverse economic and ethnic demographics and varied levels of student achievement. That diversity provided valuable perspective for the cohorts as they worked together in their bi-monthly work sessions with the university-based ASSIST staff. From late 1999 through early 2003 the service work of the Center was devoted to the implementation of a national study of leadership in middle level schools, sponsored by the National Association of Secondary School Principals, thus eliminating the potential for a new cohort to begin in 2000 or 2001. In 2003 a new ASSIST cohort was initiated. The new cohort, however, differed markedly from the prior cohorts. The focus of Project ASSIST was redirected from all types of schools to only schools of poverty with histories of low student achievement. The goal was to design a process that would continue to positively impact school leadership, school culture and climate, and school-wide instructional practices while also positively impacting student achievement in schools with a desperate need for that impact.

The process of identifying schools that fit the profile of low achieving was initiated in late 2002. The 366 middle level schools across the state of Missouri were rank ordered based upon each school's three-year pattern of state-wide test data in communication arts and mathematics. Middle level schools from the two major metropolitan school districts of the state (St. Louis and Kansas City) were removed from in the rank-order list due to other university-district collaborative projects and reorganization discussions present at that time. From the remaining list of approximately 327 middle level schools, those in the bottom quartile on the composite achievement measure were invited to participate in the third ASSIST cohort that would begin in the summer or fall of 2003.

To accommodate the shift in focus from working with schools from ranges of academic performance to working only with schools of extremely poor achievement, several design changes were made to Project ASSIST. First, work sessions were shifted from bi-monthly to monthly, with a commitment of at least ten days annually of Center staffing for each school. This was in contrast to the two prior Cohorts which included five or six work days with all schools participating together and an additional two days of data collection for each school, thus a total of seven or eight days of support annually for each school. Second, all but one work session each year was conducted individually with the schools "ASSIST team," allowing for more "personalized" work to meet the needs of each school. This provided greater flexibility of work during each session and more school-specific tasks to be accomplished by the teams between sessions. To use an educational metaphor, it would be the same as a teacher who taught his/her class as a "whole group" shifting from whole group instruction to a personalized learning experience for each student. Third, the monthly work sessions were to be held at the school site, not at the University site as was the case in the prior Cohorts. This provided the opportunity for the Center staff to more frequently observe the school in operation and to describe specific examples of needed change based upon those first-hand observations in the respective schools. Fourth, all of the schools' ASSIST teams met jointly once a year to discuss progress and share success stories and frustrations so the schools could learn from each other and feel a part of the larger "project" effort. Fifth, the principals of the project schools were brought together at least once a year and their direct administrative supervisor, usually an assistant superintendent, was invited to participate in a portion of that work day. Neither the "principal-only" work sessions nor the inclusion of the supervisors for parts of those sessions were a part of the design for the prior ASSIST cohorts in 1996-98 and 1998-2000. The final major design change was to limit the number of participating schools to three or four. From those invited to participate, the first four schools that requested participation in the project became the 2003-2006 cohort. Working with only four schools contrasted to the 1996-98 cohort of 25 elementary, middle, and high schools and the 1998-2000 cohort of 12 middle level

schools. Each of the schools participating in the project was in the bottom five percent of schools based upon the three-year composite achievement rankings. In the rank order list of all Missouri middle level schools, the ASSIST school with the lowest achievement level was fifth from the bottom and the ASSIST school with the highest achievement level was thirteenth from the bottom.

Project ASSIST Frameworks

The overall design of Project ASSIST is based upon two unique but interrelated “frameworks” for improvement. The frameworks are somewhat complex and require time to understand and establish. Once established, they are fragile and difficult to maintain. The following discussions briefly explain each framework and the significance of the concepts “comprehensive” and “systemic.”

The Student-Centered Content Framework

The Student-Centered Content Framework (Appendix A) identifies selected “best educational practices” deemed important for comprehensive change. This “content” framework personalizes the knowledge of effective schooling, drawing upon a contemporary understanding of best pedagogical practice, the most effective leadership competencies, and the organizational structures that support pedagogy and effective leadership.

The student-centered framework has three primary components that must be implemented within a caring, collaborative school culture and a climate of trust and respect if it is to positively impact success for each student. The components are Organizational Leadership, Organizational Pedagogy, and Organizational Structures. The environment is Trusting and Respectful, and the culture is Caring and Collaborative. The following sections describe these basic components as they are implemented in Project ASSIST.

Organizational Leadership

Leadership within an effective school begins with a highly competent principal who exhibits effective transformational, instructional, and managerial leadership skills (Andrews & Soder, 1987; Brewer, 1993; Duke & Leithwood, 1994; Jantzi & Leithwood, 1996;). The principal must possess a servant mentality to build the trust and respect of teachers, students, and the school community (Patterson, 2003).

The successful transformational leader values the skills ascribed in writing of a “transformational” leader. The principal exhibits competence identifying and articulating a vision, being a role model for the staff, marshalling staff support of school goals, supporting teachers, stimulating their thinking while maintaining high expectations for success (Jantzi & Leithwood, 1996). The principal supports a process that disperses leadership and ownership for success across a wide segment of the school faculty (Valentine, Clark, Hackmann, and Petzko, 2004)

Instructional leadership that makes a statement about the importance of quality educational practice is also essential. In recent decades educators have recognized the significance of instructional leadership and few have expressed that significance more eloquently than the late Ron Edmonds. From the work of the early “school effects” researchers to the contemporary writings of today, few have argued the significance of principal leadership that understands, supports, and even champions the curricular, instructional, and assessments components of a school’s programs.

The effective principal, especially the effective principal in schools of poverty, possess high levels of competence in managerial leadership (Muijs, Harris, Chapman, Stoll & Ross, 2004). The principal establishes effective and efficient policies and routines for smooth day-by-day school operations. He/she creates structures within the school to engage key school leaders in the leadership process. The principal fosters the creation of a culture that transforms how individuals view leadership, moving the mental image of leadership from one of power vested in a select individual or group to one of empowerment of all who would accept the challenge of ownership for student success. Transformational leadership generates the energy for ownership for student

success. The capacity to lead change is transforming; staff members feel empowered to make a difference. Time invested outside the classroom takes on new meaning as staff members collaboratively work to support school-wide improvement. What teachers do within their classroom also takes on new meaning as teachers attempt to match personal work with espoused statements of school-wide quality. Ownership for quality evolves because the principal creates the conditions that empower staff to redefine individual mission and vision into a collective commitment to the school's mission and vision.

Organizational Pedagogy

The responsibility to create learning and the related responsibilities for emotional, social, and physical development make the business of education unique. Any comprehensive approach to school improvement must address the core knowledge of schooling from the process of learning to the role of formative and summative assessment. Integrated curriculum and authentic, constructivist teaching approaches are recognized as significant practices for student understanding of content, higher-order thinking, and problem-solving skills while more traditional practices are touted as appropriate for some students and some outcome goals such as measurements of factual recall. Exclusive use of one or two practices may not meet the needs of all students and may, based upon existing knowledge about how students learn, deny to many the opportunity to succeed. Differentiated approaches to instruction and varied formative and summative forms of assessment fit contemporary understandings of how students learn. Learning theories abound and educators must know those varied theories, understand their value in selected situations, and apply them effectively so each young adolescent is given the best opportunity to succeed. What is known about how young adolescents learn? In what ways are students different at the various developmental stages during the schooling experience? What curriculum, instruction, and assessment practices best fit these developmental progressions? Any meaningful effort to improve the schooling process must include the study of these questions and thus the pedagogical components of understanding how young adolescents learn and the forms of curriculum, instruction, and assessment that match with learning for young adolescents. These components are the business of schooling (Jackson & Davis, 2000).

Organizational Structures

The organizational structures of the school must fit the desired leadership and pedagogical practices established by the values and beliefs, the mission and vision, and the implementation strategies to accomplish the vision. Form should follow function and in the case of school improvement, the organizational structures must evolve from the leadership and pedagogical components of the framework. Staff members must collaboratively identify the best models for organizing time, scheduling curriculum, and defining the learning environment. Organizational structures also influence relationships. Organizational structures should be established that foster interaction and interpersonal relationship-building, both among and between students, teachers, administrators, parents, community, and others with vested interests in students' successes. Structures should also be established that collect and utilize data to assess and inform school improvement, school success, and individual student success (Valentine, et al., 2004). Staff members must be hired because they embody the competencies needed to educate young adolescents. Professional development must be designed and implemented to address the needs of those who teach young adolescents. Woven throughout the fabric of the structures used in the school are the essential elements of collaboration, relationship development, and progress toward the accomplishment of the school vision. The "vision-driven" process for change and improvement detailed later in this paper as the second framework is a prime example of how purposeful structure shapes the direction and vision of the school and, most importantly, the commitment of a faculty to that vision.

Trusting, Respectful Climate

Climate of an organization is determined primarily by the relationships among the teachers and administrators of the school. Those relationships drive the climate as well as the relationship the school's adults have with their clients, the students, parents, and school community. A school's climate is a function of the

collective perceptions of the working relationships and conditions within which the educators function. Trust and respect are necessary if staff members, school administrators, parents, and others with vested interests in a quality school are to work together effectively (Hoy & Sabo, 1998). Discussions during the development of the values' and beliefs' statements build a foundation for trust and respect. Discussions that lead to collaborative development of the mission, vision, goals, and implementation strategies define those relationships. The manner with which a principal implements instructional and managerial roles further establishes images of trust and respect in the minds of the staff. And finally, the principal's competence as a managerial, instructional and transformational leader directly correlates to the school's climate (Lucas, 2001; Painter, 1998; Prater, 2004; Quinn, 1999). The ability to empower and establish ownership among the faculty is associated with the skills of the principal and the climate the principal establishes. Without a climate of trust and respect, even the best pedagogy and structure will have marginal effect upon the success of each student.

Caring, Collaborative Culture

The culture is often defined as the “way we do things around here.” It represents the values, the beliefs, the assumptions, and the traditions of the organization. A caring, collaborative culture is slow to evolve and difficult to maintain.

A school's culture should represent a caring about the success of others, particularly students. It should represent collaborative relationships that place the success of each student at the fore. The value system of the school should expect that each student be given the support necessary to be a successful member of the school community. Effective cultures are led by transformational leaders who value and foster collaboration, empowerment, and ownership. The culture must embrace continuous professional development, self-reflection, progressive thinking, and risk-taking, all in the interest of success for each student. Staff members place student success ahead of personal convenience. They are committed to a quality school for each student. The culture of the school is a collection of the shared assumptions of the members of the school that either inhibit or facilitate student growth. Principals have capacity to shape the culture positively or negatively by the manner with which they address these assumptions. Collaboration is likely to work only when the principal and a significant number of teachers at a school become convinced that it will actually lead to improved teaching and learning (Fullan & Hargreaves, 1991).

Once established, the truly caring, collaborative culture is the cocoon in which candid, difficult, challenging discussions and disagreements can occur that continuously progress the school toward the changes necessary to better serve students. A collaborative culture is the foundation upon which a professional learning community rests. It is an essential ingredient for long-term, continuous school improvement.

The Vision-Driven Change Process Framework

The “vision-driven process” framework (Appendix B) defines the strategies used in Project ASSIST to initiate organizational change. These processes are discussed and implemented initially in a step-by-step, “learning-to-walk” structure. Eventually, the school leaders and faculty are expected to “internalize” these processes and will thus function in a more comprehensive manner (Appendix C). This conception represents a more fluid, macro image of continuous change. Both the initial and the internalized conceptions are grounded in the development, accomplishment, and maintenance of a “vision” (direction) for school improvement. The concept is, in most schools, slow to evolve and often takes two or three years of “step-by-step walking” before the processes are internalized an artifact of the school's culture. With the pressure today to be “data-driven,” many school leaders and teachers find it difficult to understand the bigger picture of vision drive change and cling to that picture while being bombarded with the detailed numbers associated with high-stakes testing. The following section clarifies how Project ASSIST defines the differences between vision-driven and data-driven school improvement.

Vision-Driven

At the core of the vision-driven framework is the school's collaboratively-developed vision and the goals necessary to accomplish that vision. The vision is a conception of what the school should become over the next three to five years, developed deliberately by the faculty and grounded in the knowledge of best practice. The collaboratively developed values, beliefs, commitments, and mission of the faculty directly inform the vision. The vision is implemented through a set of strategies and tasks defined in the school-wide action plan. School component focus teams engage all faculty in the development of action plans to accomplish each of the school's goals. The focus teams are responsible for identifying action plans for each goal while viewing the goal through the lenses of major components necessary for the school to function effectively, such as curriculum, instruction, leadership, resources, professional development, research, climate, and culture. As the action plan is implemented, progress is assessed and the formative data findings inform future vision development and define levels of goal accomplishment.

The first time a school progresses through the steps of the vision-driven change process, each step is taken in a deliberate and unique fashion. Once the school has progressed through the linear steps two or three times, the understanding of the complexity of the process evolves and progression toward internalizing the process as part of the school's culture becomes evident. Once internalized, the process becomes a fluid sequence of "big picture" images, still centered on the vision, but implemented through a continuous process of building knowledge of best practice, refining the vision per best practice, assessing existing practice, establishing goals and plans for change, and implementing those plans. Values and beliefs are slow to change, but the school's vision should be revisited annually, and development of professional knowledge should be a continuous process.

Data collected during Project ASSIST about existing practices within the school setting are used to inform the organizational goals, not shape the vision. If the vision is data-driven, then the process becomes one of continually responding to specific deficiencies within the school setting, for example, low math achievement data, rather than addressing change via the knowledge of best practices. Deliberate change grounded in best practice is slow but has the potential to last. The "quick fix" strategies and repetitive leap-frog from one program or strategy to another often retards change. Change driven by deficiencies is short-lived and infrequently effective in making a meaningful difference in achievement. Such changes are often mandated by state or district policy and frequently are defined by specific student achievement scores. Improving test scores and any other form of student success is a complex challenge and requires a complex, not a simplistic approach. Only through comprehensive, systemic processes grounded in the content knowledge of best practice can meaningful change take place.

Comprehensive and Systemic

Both frameworks for school improvement are comprehensive and systemic. The following provides an explanation of these important concepts as used throughout Project ASSIST.

Comprehensive

The frameworks are comprehensive because the components within the frameworks are broad in scope, addressing the best knowledge about all critical aspects of educational practices and organizational change. In the "content" framework, for example, changing organizational structures from a departmentalized to an interdisciplinary approach does not improve student academic achievement. To impact achievement, curriculum must be refined to fit with the organizational structure and instructional practices must be adapted to fit both the revised curriculum and the new structure. Another example, within the "process" framework, would be the adoption of a set of goals designed specifically to improve classroom instruction. While such focus has the potential to impact student achievement, such a narrow focus on student achievement misses the mark needed to promote the continuous development of the social and emotional maturational skills essential to young adolescents' development. There might be a focus on improving instruction but if there is no focus on building

genuine relationships or establishing student self-discipline, efforts at instructional change fall short of making real differences in learning.

Systemic

The frameworks are systemic because the components are interdependent across the varied systems within the school setting. In the “content” framework, for example, having a skilled, likable manager with minimal expectations for student success is little better than a tyrant with the same low expectations. Improving school leadership will not make a difference if that leadership does not aggressively support the best practices of educational pedagogy. The strategies throughout the “process” framework are systemic, each interdependent on the other. For example, to build a vision not grounded in the values and beliefs of the faculty or in best practice is a waste of time and energy. To engage but a portion of the faculty in the development of each of the components described in the process is just as futile. Each segment of the school community, and especially all staff responsible for achieving the vision, must be engaged in all processes for improvement. While time and energy are limited, the engagement of all in the discussions and decision-making associated with these essential components are necessary if continuous change is to be initiated and maintained. The processes for change must be continuous, with periodic review of all segments of the process.

Data Findings

The number of schools served by Project ASSIST is relatively small compared to many reform models of the past decade and the primary work with middle level schools narrows the scope of the Project. Qualitative and quantitative data about the impact of Project ASSIST have been and continue to be collected throughout the Project. Findings presented in this section are organized by school culture and climate, pedagogical focus, and school leadership. A brief discussion accompanies each section.

School Culture and Climate

Without question, school culture is a critical component for any successful change. As efforts of comprehensive systemic change are implemented, the school’s culture should evolve into one of collaboration necessary for the development and maintenance of a professional learning community or learning organization.

The School Culture Survey (SCS) was used to collect data about the perceived artifacts associated with an effective school culture (Gruenert, 1998; Gruenert & Valentine, 1998). The School Organizational Climate Description Questionnaire-Revised Middle (Hoy, 1998) and the Organizational Health Inventory-Middle (Hoy, 1998) were the primary school climate instruments. The Staff Assessment Questionnaire (Andrews and Soder, 1987) and the School Participant Empowerment Scale (Short and Rinehart, 1992) were also used to collect teacher’s perceptions about factors that provide understanding about school culture and climate. Data were collected prior to the start of the Project ASSIST initiative and collected again two years later at the conclusion of the project. The culture and climate data for the first two ASSIST cohorts are presented in Table 1. More detailed data charts showing the group means, average change over the two years, t-test values, and degrees of freedom for each variable are provided in Appendix D.

The School Culture Survey (SCS) was the primary quantitative data instrument for obtaining insight about the changes in school culture. Differences in the pre and post mean scores for the five SCS variables reported in this section were significant. Teacher Collaboration measures the degree to which “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. Understanding the school’s common mission and working toward accomplishment of that mission was analyzed by the variable Unity of Purpose. Unity of Purpose increased for both cohorts and was significant for the second cohort and the combination of the two cohorts. The Professional Development variable describes the degree to which teachers “value continuous personal development and school-wide improvement.” The degree to which teachers work together effectively, trust

each other, value each other's ideas, and assist each other in work toward the tasks of the school organization was measured by the Collegial Support variable. The Learning Partnership variable of the SCS, which describes how well teachers, parents, and students share and communicate a common expectations for student success was also significant for the second cohort and the combined data from both cohorts. These findings affirmed a change in the project schools toward a more focused mission and a more collaborative and collegial effort to accomplish that mission.

Table 1
Pre-Post Test of Differences for Project ASSIST Culture/Climate Variables

| Culture/Climate Variables | 1996-1998 ML Schools (N=8) | 1998-2000 ML Schools (N=12) | 1996-1998 1998-2000 ML Schools (N=20) |
|---|---|--|--|
| Teacher Collaboration | 0.015* | 0.014* | 0.000** |
| Learning Partnership | 0.131 | 0.001** | 0.000** |
| Unity of Purpose | 0.180 | 0.000** | 0.000** |
| Professional Development | 0.018* | 0.046* | 0.002** |
| Teacher Collegial Support | 0.226 | 0.001** | 0.001** |
| Teacher Collegial Behavior | X | 0.100 | X |
| Teacher Committed Behavior | X | 0.007** | X |
| Teacher Disengaged Behavior # | X | 0.001** | X |
| Teacher Affiliation | X | 0.001** | X |
| Positive Learning Climate | 0.021* | 0.266 | 0.351 |
| High Expectations | 0.042* | 0.301 | 0.352 |
| Dedicated Staff | 0.007** | X | X |
| Teacher Decision Making | 0.061 | 0.004** | 0.001** |
| Teacher Professional Growth Opportunities | 0.217 | 0.034* | 0.026* |
| Teacher Peer Status and Respect | 0.350 | 0.838 | 0.396 |
| Teacher Work Autonomy | 0.546 | 0.408 | 0.852 |
| Teacher Impact on School Life | 0.408 | 0.817 | 0.456 |

X: Data not collected for that cohort

*Significant at .05 level

**Significant at .01 level

The perceptions of teachers that they are “empowered” supports the development of a collaborative school culture. The School Participant Empowerment Scale was used to measure factors of empowerment for both cohorts. The variables of Decision Making and Professional Growth Opportunities were significant for the second cohort and the combined cohorts. The Decision Making variable assessed the degree to which teachers “perceive they are involved in the decision making about issues of critical concern to them and their work, coupled with the belief that their involvement is genuine and their opinions are critical to the outcome of the decisions.” The Professional Growth variable assesses the degree to which teachers “perceive the school provides them with opportunities to grow and develop professionally, to learn continuously, and to expand their own skills through the work life of the school.” These measures supported changes in the schools toward a more participative, empowering, collaborative culture focused on individual and school-wide development.

For the second cohort, two instruments, the Organizational Climate Description Questionnaire-Revised Middle (OCDQ-RM) and the Organizational Health Inventory-Middle (OHI-M), developed specifically for middle level schools in the late nineties were used to collect data from the second cohort. Both provided insight about school climate. The OCDQ_RM measured Teacher Collegial Behavior, Teacher Committed Behavior,

and Teacher Disengaged Behavior, and the OHI-M measured Teacher Affiliation. The findings from Teacher Committed Behavior affirmed that the teachers perceived increased effort to help students develop both socially and emotionally, investing extra hard work to ensure student success in school. Findings for the Disengaged Behavior factor identified increases in positive attitudes about the meaning and focus on professional activities and acceptance of colleagues. This was supported by the findings for the Teacher Affiliation factor, which measured the “sense of friendliness and strong association with the school” and the degree to which teachers “feel good about each other, their job, and their students.”

Additional climate factors measured by the Staff Assessment Questionnaire (SAQ) supported changes in school climate in the ASSIST schools. The variable Dedicated Staff supported the “commitment to exercising a professional role with the school.” Not all data from the SAQ, however, provided a clear picture of positive change. The factors of Positive Learning Climate and High Expectations were both significantly lower in the pre/post data collection. This implied that the “degree to which staff provide student with structured, purposeful, and productive environments” and the “degree to which there exists within the school a climate of high expectations, characterized by a tone of respect for teachers, students, parents, and community” were not perceived as positively at the conclusion of the project. Discussions with some members of the ASSIST teams from those schools revealed a perception that the faculties were relatively naïve about the components of effective schooling at the beginning of the project. As their knowledge grew as a result of the Project, they realized they were lacking in many areas that they previously thought were adequate. Therefore, when they completed the post-assessment their responses reflected a more critical analysis of their status than was the case when they completed the pre-assessments. While this is a plausible interpretation, one must wonder why the analyses of other variables from the first cohort were not consistently negative. Might they have had a better “starting” knowledge of some issues than others?

School Leadership

The teacher perception data about school leadership in the Project ASSIST schools were collected using the SCS, OCDQ-RM, OHI-M, and the SAQ instruments. The Collaborative Leadership Factor of the SCS, the Strong Principal Leadership factor of the SAQ, and the Collegial Leadership factor of the OHI-M were the only variables with statistically significant differences in the pre-post measures. Collaborative Leadership measures the degree to which “school leaders establish and maintain collaborative relationships with school staff.” The factor describes leadership that values teachers’ ideas, seeks input, engages staff in decision-making, trusts the professional judgments of teachers, supports and rewards risk-taking and innovation, and reinforces effective practices by staff. This primary variable from the SCS is used to define both effective leadership and a form of cultural leadership that provides a foundation for a collaborative school culture. Though positive increases were noted in the data for both cohorts and the combined cohorts, significant differences were found only for the second cohort and the combined data.

In contrast to the findings for the Collaborative Leadership Factor, the Strong Principal Leadership factor from the Staff Assessment Questionnaire provided teacher-perceived leadership data that declined significantly from the pre to post assessments for the first cohort and increased significantly for the second cohort, neutralizing any chance of a combined significance. The Strong Principal Leadership factor describes the “level of strategic interaction between the principal and teachers in areas of mobilizing resources, communicating, serving as an instructional resource, and being a visible presence.” Even though detailed analyses of these four scales of the principal leadership factor can provide mixed findings across the four scales (Quinn, 2002), the significant decline in perceived leadership for the first cohort again raises the possibility of more informed, higher expectations by the time the post assessment was administered.

Table 2

Pre-Post Test of Differences for Project ASSIST Leadership Variables

| Leadership Variables | 1996-1998 ML Schools (N=8) | 1998-2000 ML Schools (N=12) | 1996-1998 1998-2000 ML Schools (N=20) |
|-----------------------------|---|--|--|
| Collaborative Leadership | 0.127 | 0.008** | 0.002** |
| Supportive Principal | X | 0.106 | X |
| Directive Principal | X | 0.413 | X |
| Restrictive Principal | X | 0.483 | X |
| Strong Principal Leadership | 0.007** | 0.034* | 0.928 |
| Collegial Leadership | X | 0.020* | X |
| Principal Influence | X | 0.071 | X |

X: Data not collected for that cohort

*Significant at .05 level

**Significant at .01 level

The factor of Collegial Leadership from the OHI-M was not available for the first cohort but was significantly more positive in the post-assessment of the second cohort. The factor measures “principal behavior that is friendly, supportive, open, and guided by norms of equality.” The four other variables used to measure principal leadership (Supportive Principal, Directive Principal, Restrictive Principal, and Principal Influence) in the second cohort each showed slight but positive improvement.

From an overall perspective, it is evident that teachers from the second cohort of ASSIST schools perceived greater growth by their principals than was the case for the first cohort. Though that growth was not consistent across all variables, it does provide adequate evidence that the principals who worked as integral members of their ASSIST teams did increase their abilities to function as more collaborative leaders and establish a more collaborative culture across their schools.

Pedagogical Focus

The final group of variables reported in this paper were from the “pedagogical” component of the Project ASSIST design. The pedagogical organization component focuses specifically on improving the curricular, instructional, and assessment aspects of schooling as well as the study of best practices for young adolescents as those practices relate to how students learn. Two forms of data are reported in Table 3. The first represent teacher perceptions from the OHI-M, SAQ, and SPES surveys. The second are from the Instructional Practices Inventory (IPI) data profiles collected periodically in each of the ASSIST schools.

Academic Emphasis measures the “extent to which the school is driven by academic excellence, with high but achievable goals established for students.” As a measure from the OHI-M, the data were available only for the second cohort. The findings were highly significant. A second variable from the OHI-M associated with pedagogy was the factor of Resource Support of classroom materials and supplies. It was also highly significant.

Three factors from the SAQ were used to assess the pedagogical component of Project ASSIST for both cohorts. The factor of Curriculum Continuity, which measures vertical and horizontal curriculum articulation was not different in the first cohort but was so significantly different for the second cohort that it created significance for the combined cohort analysis. The factor of Early Identification measures “the degree to which school staff purposefully identify, in a timely manner, students with special needs.” For the first cohort, the post-assessment data were noticeably lower and for the second cohort the data were significantly higher. Analysis of the data for the SAQ factor of Frequent Monitoring of student progress and instruction produced

almost identical results, with the first cohort data being significantly lower and the second cohort data being significantly higher. The remaining SAQ factor did not produce significant results.

The pattern of teacher perceptions for the component of pedagogy follows the patterns noted for the components of climate/culture and leadership. The pre-post data for the first cohort are often negative while the pre-post data for the second cohort are generally more positive.

Table 3
Pre-Post Test of Differences for Project ASSIST Pedagogical Variables

| Pedagogical Variables | 1996-1998 ML Schools (N=8) | 1998-2000 ML Schools (N=12) | 1996-1998 1998-2000 ML Schools (N=20) |
|---|---|--|--|
| Academic Emphasis | X | 0.000** | X |
| Vertical/Horizontal Curriculum Articulation | 0.985 | 0.015* | 0.046* |
| Early Identification of Student Special Needs | 0.053 | 0.005** | 0.681 |
| Frequent Monitoring Student Progress/Instru. | 0.003** | 0.004** | 0.454 |
| Resource Support Class Materials/Supplies | X | 0.002** | X |
| Teacher Self-Efficacy for Student Learning | 0.363 | 0.604 | 0.534 |
| Student Engaged Higher-Order Learning | 0.014* | 0.002** | 0.000** |
| Student High-Order Learning Conversations | 0.219 | 0.176 | 0.058 |
| Teacher-Led Instruction | 0.837 | 0.003** | 0.039* |
| Student Seatwork with Teacher Engaged | 0.177 | 0.047* | 0.024* |
| Student Seatwork with Teacher not Engaged | 0.203 | 0.001** | 0.001** |
| Student Disengagement | 0.181 | 0.808 | 0.536 |
| Student Higher-Order Learning | 0.031* | 0.016* | 0.001** |
| Stu Higher-Order Learning/Tchr.-Led Instru. | 0.036* | 0.000** | 0.000** |
| Tchr. Led Instru/Stu Seatwork Tchr Engaged | 0.139 | 0.001** | 0.299 |
| Student Seatwork | 0.055 | 0.000** | 0.000** |
| Student Seatwork/Student Disengagement | 0.030* | 0.000** | 0.000** |
| Stu Seatwork w/o Tchr./Stu. Disengagement | 0.110 | 0.000** | 0.000** |

X: Data not collected for that cohort

*Significant at .05 level

**Significant at .01 level

The Instructional Practices Inventory is a complex classroom observation process designed by Painter and Valentine (1996) for the ASSIST project to assess levels of meaningful student engagement in learning and the degree to which students are engaged in higher-order thinking. The data collection process involves scores of classroom observations per day pooled into a “profile” depicting student engaged learning across the entire school for a specified period of time, usually a full school day. In project ASSIST the data are collected periodically and each school’s ASSIST team is prepared to lead the faculty in discussions about the data as a basis for self-reflection and goal setting. IPI data collectors must become valid coders of the classroom observations and demonstrate a coder-reliability and inter-rater reliability of .90 or higher to collect data for research. The web site of the Middle Level Leadership Center (www.MLLC.org) provides detailed discussions about the development of the IPI, the processes and protocols for codifying observations, and the workshops designed to establish coder reliability (Valentine, 2005).

The six categories of the IPI are (1) Student Disengagement, (2) Student Seatwork with the Teacher not Engaged, (3) Student Seatwork with the Teacher Engaged, (4) Teacher-Led Instruction, (5) Student Learning Conversations—Higher Order, and (6) Student Engaged Higher-Order Learning. Generally, the goals of most ICSEI, Valentine, 11

schools are to reduce the number of observations, meaning the frequency, of categories 1-2-3 while increasing the observations for categories 4-5-6. Most school faculties see the value of increasing learning experiences that authentically engage student in higher-order thinking and reducing the “busy” work, often represented by worksheets and usually coded as a category 2 or 3. The analysis of the IPI data for both cohorts provided valuable insight about the actual form of instruction across the schools.

The findings presented in the lower two-thirds portion of Table 3 are for twelve pre-post analyses for each of the cohorts and the combined data set. In both sets of schools and the combined analyses the percentages of observations for category 6, Student Engaged Higher Order Learning, were significantly higher. The data for Student Learning Conversations, category 5, and Student Engaged Higher Order Learning, category 6, were also significantly higher for both schools and the combined analysis. In a like manner, the data for categories 4-5-6 were also significantly higher for both cohorts and the combined analysis.

As noted, the goal of most schools is to increase categories 4-5-6 while decreasing categories 1-2-3. An analysis of category 1 did not show significant changes, but the analysis of categories 2, student seatwork with the teacher not engaged, and category 3, student seatwork with the teacher engaged, were lower for both cohorts and significantly lower for cohort two and the combined analysis. As expected other combinations of analyses for the six categories produced findings consistent with these results, documenting that the pre-post observational data differences for the ASSIST school were generally positive increases and positive decreases in instructional methodology and student engaged learning.

Summary of Findings and Discussion

The purpose of Project ASSIST for the 1996-98 and 1998-2000 cohorts was to positively impact the school cultures/climates, instructional programs and practices, and leadership of participating schools by building the capacity among a teams of teachers and the principal to lead change from inside the school. To build a nucleus of leadership for change, each school’s ASSIST team met bi-monthly with staff from the Middle Level Leadership Center to study best practices and strategies for applying best practices in the participating schools. MLLC staff engaged the teams in activities designed to build knowledge and transfer that knowledge to the teams’ respective faculties. The development of teams involved strategies designed around the two “frameworks” for comprehensive, systemic change described in the early portions of this paper and itemized in the Framework schema of Appendices A, B, and C. The 1996-98 cohort of eight middle level schools were part of a larger cohort of 25 schools, including eight elementary and ten high schools from across the state of Missouri. The 1998-2000 cohort of 12 schools were all middle level schools from across the state. The activities the Center staff used to build the capacity for leadership of change for the ASSIST teams in the second cohort were more specifically embedded in middle level best practices, in contract to the more generic activities used to build capacity for the 25 schools of the 1996-98 cohort. This paper presented findings from pre and post data analyses for the 1996-98 and 1998-00 cohorts. Schools from those volunteered to participate in the Project and were demographically representative of schools from across the state.

Positive changes in school culture and climate were evident. The most notable findings were those associated with an increased focus on the mission of the schools, the increased collaboration with the schools and increased perceptions of empowerment among faculty. Differences in the findings between the first and second cohort of schools were also evident.

Significant changes were also found in the analysis of the leadership variables from the pre and post assessment data. Collaboration was again a key concept, with greater skill in setting the stage for collaboration evolving from the principals of the ASSIST schools. The collegial behavior of the principals supported the development of principal teacher relationships that are a key to both positive leadership and positive school climate. Again, differences in findings between the first an second cohort were evident.

The data analyses for the pedagogical component of ASSIST were especially informative. Significant findings were identified in teacher’s perceptions from survey instruments and as described above, those perceptions were sometimes different between the two cohorts. But the most significant findings for pedagogy

were the empirical data from the Instructional Practices Inventory. Significant increases in best instructional practices were found for both cohorts. To a lesser degree than was the case for the components of culture/climate and leadership, the data for pedagogy were also more positive for the 1998-2000 cohort of schools.

The data from this study support the assumption that the ASSIST initiative developed the capacity among the teams of teacher leaders and principal to lead comprehensive, systemic change in middle level schools. Though the overall evidence was persuasive that the ASSIST initiative produced results in the three broad components of school culture/climate, leadership, and pedagogy, the different levels of success for the two cohorts poses important questions for future consideration. For example, were the teachers' perceptions in the first cohort more reflective of an initial lack of understanding of best practices when they completed the initial pre-assessment, therefore creating an artificially high set of initial assessment data that could not be surpassed as they developed a more accurate knowledge of best practices? In other words, were their expectations so low in the pre-assessment that they provided inflated data and more realistic about their shortcomings as they built knowledge throughout the ASSIST process? Some post-project discussions with teachers from the first cohort supported those possibilities.

Another question to consider is how advantageous is it for a school improvement process to be "grade-level" focused. The first cohort included elementary, middle, and high schools, whereas the second cohort was a group of "only" middle level schools? Narrowing the focus to middle level schools allowed the staff of the Center to use specific middle level examples and strategies. In addition, the level of expertise of the Center staff was more "middle" than elementary or high school. That deeper expertise may have influenced the results of change for the two cohorts. Yet another consideration is the size of the cohort groups. The second cohort was less than half the number of schools as the first cohort. The combined effect of fewer schools and only middle level school may have played a part in the more positive data for the second cohort of schools.

The very nature of the schools that participated in the project may have been an impacting factor. For example, some schools in the first cohort were there because their superintendents wanted the schools to improve and viewed the project as a vehicle for that improvement. Near the conclusion of the first cohort, middle level schools across the state were learning of the ASSIST process and beginning to request the opportunity to participate in the second cohort. The more "voluntary" nature of many of the second cohort schools, as compared to the more "directed" participation of the first cohort of schools may account for some of the differences in results for the two cohorts.

With evidence that the ASSIST process can impact school culture/climate, leadership, and pedagogy, the final critical question about the veracity of the ASSIST process is the degree to which the initiative can positively influences factors that will result in enhanced student achievement. Changes in state assessment measures during the multi-year process negated the opportunity to study the relationship of the ASSIST process to student achievement for the first cohort. Achievement data are currently being analyzed over a multi-year period for the schools in the second cohort. The third cohort of schools, which are now in their second year of a three year commitment, may provide the greatest insight about the impact of ASSIST on student achievement. The challenges, however, are greater with cohort three than with the first two cohorts because of the extremely difficult circumstances that are associated with school that have been so deeply mired in poor performance for many years. Finding ways to move out of this downward spiral has been and continues to be the challenge for the Center staff and the ASSIST teams from the cohort-three schools.

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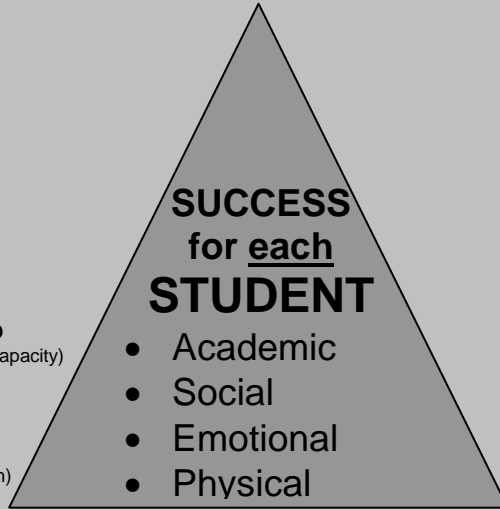
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Appendix A: Project ASSIST Student-Centered Content Framework

CARING, COLLABORATIVE CULTURE
TRUSTING, RESPECTFUL CLIMATE

ORGANIZATIONAL LEADERSHIP

- **Principal/Administrative Team Leadership**
 - ◆ Establish Distributive/Participative Leadership (Capacity)
 - ◆ Establish Transformational Leadership (Change)
 - ◆ Establish Instructional Leadership (Pedagogy)
 - ◆ Establish Managerial Leadership (Efficiency)
- **Staff Leadership**
 - ◆ Accept Leader Roles (School Improvement Team)
 - ◆ Become a Community of Leaders (Staff)
 - ◆ Commit to Success for Each Student (Staff)
- **Parent Leadership**
 - ◆ Accept Leader Roles (Committees)
 - ◆ Provide Instructional Support (Volunteers)
- **Student Leadership**
 - ◆ Accept Leader Roles (Committees)
 - ◆ Develop Leadership (Student Governance)
- **Community Leadership**
 - ◆ Accept Leader Roles (Committees)
 - ◆ Provide Instructional Support (Volunteers)
- **District Leadership**
 - ◆ Understand Site-Level Needs
 - ◆ Support Site-Level Needs



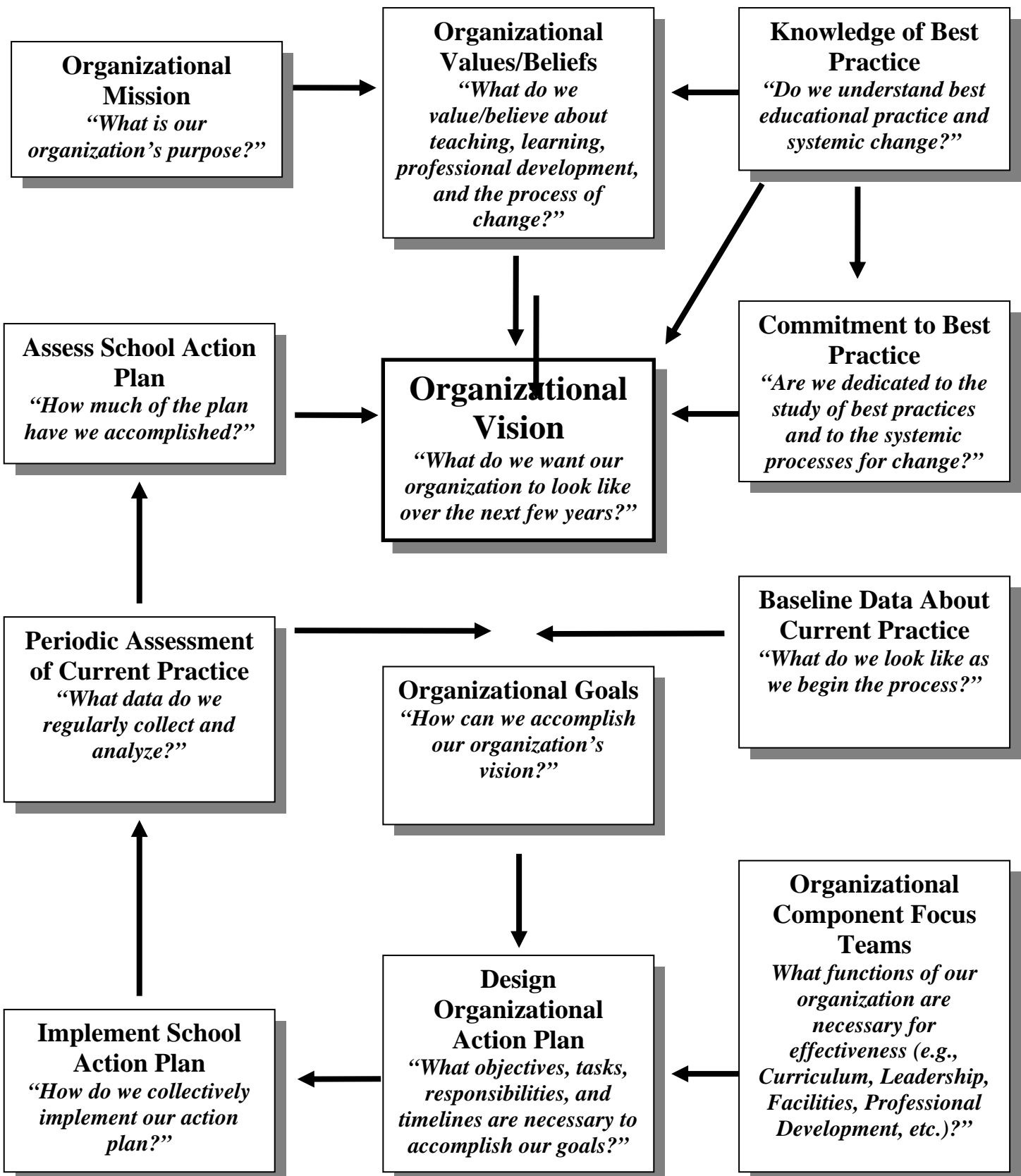
ORGANIZATIONAL STRUCTURE

- **Change Processes**
 - ◆ Establish Comprehensive and Systemic Processes
 - ◆ Establish Vision-Driven not Deficit-Driven Change
 - ◆ Inform Change via Formative and Summative Data
- **Program Delivery**
 - ◆ Embed Basic Skills and Enrichment Programs
 - ◆ Require Core and Exploratory Curriculum
 - ◆ Provide Co-Curricular/Extracurricular Opportunities
 - ◆ Implement Student Grading and Homework Policies
 - ◆ Create Small Learning Communities/Teaming Structures
 - ◆ Implement Multi-Year/Extended Learning Relationships
 - ◆ Implement a Flexible Instructional Schedule
 - ◆ Implement Student-Adult Advisement Opportunities
 - ◆ Implement Multiple Transition Practices to/from School
 - ◆ Provide Service Learning/Volunteerism/Health Services
- **Personnel Policies**
 - ◆ Recruit, Select, Retain, Develop, Dismiss Aggressively
 - ◆ Engage Staff in the Design/Implementation of Continuous Authentic and Relevant Professional Development
 - ◆ Align Teaching Assignments to Teacher Ability and Program Needs
 - ◆ Organize Staff by Teams and Content Areas
 - ◆ Provide Teacher and Team Planning Times
- **Student Policies**
 - ◆ Assign/Group Students Heterogeneously
 - ◆ Establish Attendance and Behavior Policies
- **Resource Allocation**
 - ◆ Align with Vision/Goals

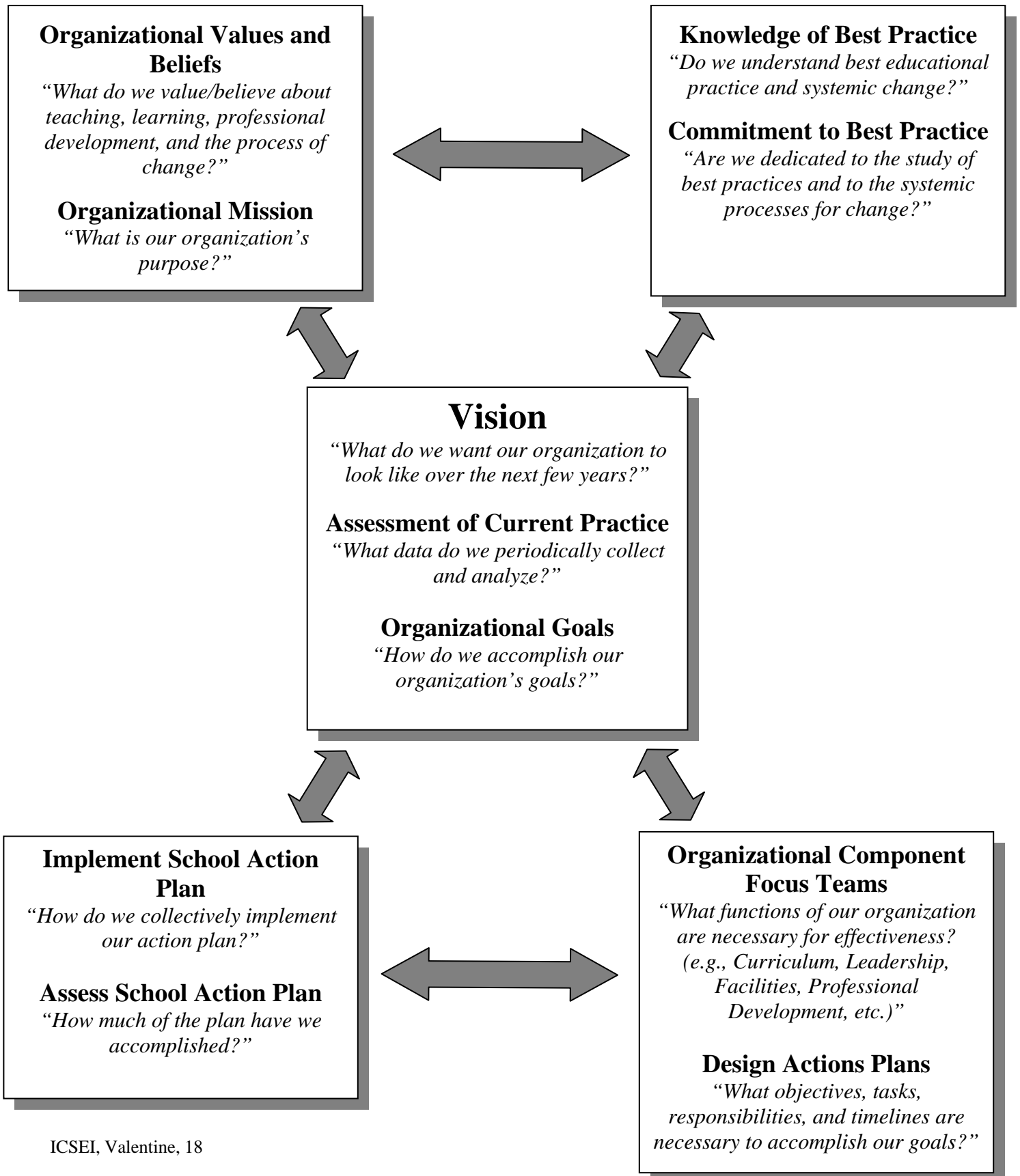
ORGANIZATIONAL PEDAGOGY

- **Standards-Based, Developmentally Appropriate Curriculum**
 - ◆ Align with State Standards
 - ◆ Align with Curricula of other Schools
 - ◆ Align with Instruction and Assessment
 - ◆ Integrate across disciplines
 - ◆ Relevant and Authentic for Young Learners
- **Standards-Based, Developmentally Appropriate Instruction**
 - ◆ Align with State Standards
 - ◆ Align with Curriculum and Instruction
 - ◆ Engage Learners Actively (Metacognition)
 - ◆ Relevant and Authentic for Young Learners
- **Standards-Based, Developmentally Appropriate Assessment**
 - ◆ Align with State Standards
 - ◆ Align with Curriculum and Instruction
 - ◆ Align with State/National Testing Practices
 - ◆ Relevant and Authentic for Young Learners
- **Grounded in Knowledge of Learners**
 - ◆ Match Academic Readiness and Learning Styles
 - ◆ Promote Socialization with Peers
 - ◆ Foster Emotional Self-Image
 - ◆ Foster Self-Esteem (General)
 - ◆ Match Physical Needs & Development

Appendix B: Vision-Driven Process for Initiating School Improvement



Appendix C: Vision Driven Process of Internalized School Improvement



Appendix D

ASSIST Pre-Post Paired Sample Two-Tailed T-Tests

| Leadership Variables | Groups | Source | Pre | Post | +/- | t | df | Sig. |
|----------------------------------|---------------|---------------|------------|-------------|------------|----------|-----------|-------------|
| Collaborative Leadership | 96-98 | SCS | 3.47 | 3.55 | 0.22 | -1.734 | 7 | 0.127 |
| Collaborative Leadership | 98-00 | SCS | 3.25 | 3.51 | 0.26 | -3.210 | 11 | 0.008 |
| Collaborative Leadership | 96-00 | SCS | 3.34 | 3.58 | 0.24 | -3.559 | 19 | 0.002 |
| Supportive Principal | 98-00 | OCDQ-RM | 2.66 | 2.75 | 0.09 | -1.763 | 11 | 0.106 |
| Directive Principal | 98-00 | OCDQ-RM | 1.90 | 1.86 | -0.04 | 0.851 | 11 | 0.413 |
| Restrictive Principal | 98-00 | OCDQ-RM | 2.38 | 2.35 | -0.03 | 0.725 | 11 | 0.483 |
| Strong Principal Leadership | 96-98 | SAQ | 2.48 | 2.18 | -0.30 | 3.798 | 7 | 0.007 |
| Strong Principal Leadership | 98-00 | SAQ | 3.33 | 3.52 | 0.19 | -2.424 | 11 | 0.034 |
| Strong Principal Leadership | 96-00 | SAQ | 2.99 | 2.98 | -0.01 | 0.091 | 19 | 0.928 |
| Collegial Leadership | 98-00 | OHI-M | 2.78 | 2.93 | 0.15 | -2.720 | 11 | 0.020 |
| Principal Influence | 98-00 | OHI-M | 2.78 | 2.91 | 0.13 | -2.002 | 11 | 0.071 |
| Culture/Climate Variables | Group | Source | Pre | Post | +/- | t | df | Sig. |
| Teacher Collaboration | 96-98 | SCS | 2.80 | 3.18 | 0.38 | -3.209 | 7 | 0.015 |
| Teacher Collaboration | 98-00 | SCS | 2.97 | 3.15 | 0.18 | -2.910 | 11 | 0.014 |
| Teacher Collaboration | 96-00 | SCS | 2.90 | 3.18 | 0.28 | -4.25 | 19 | 0.000 |
| Teacher-Parent Partnership | 96-98 | SCS | 3.31 | 3.50 | 0.19 | -1.712 | 7 | 0.131 |
| Teacher-Parent Partnership | 98-00 | SCS | 3.13 | 3.41 | 0.28 | -4.568 | 11 | 0.001 |
| Teacher-Parent Partnership | 96-00 | SCS | 3.20 | 3.45 | 0.25 | -4.334 | 19 | 0.000 |
| Unity of Purpose | 96-98 | SCS | 3.76 | 3.88 | 0.12 | -1.491 | 7 | 0.180 |
| Unity of Purpose | 98-00 | SCS | 3.51 | 3.96 | 0.45 | -6.786 | 11 | 0.000 |
| Unity of Purpose | 96-00 | SCS | 3.61 | 3.93 | 0.32 | -5.114 | 19 | 0.000 |
| Professional Development | 96-98 | SCS | 3.90 | 4.08 | 0.18 | -3.065 | 7 | 0.018 |
| Professional Development | 98-00 | SCS | 3.73 | 3.87 | 0.14 | -2.248 | 11 | 0.046 |
| Professional Development | 96-00 | SCS | 3.80 | 3.95 | 0.15 | -3.604 | 19 | 0.002 |
| Teacher Collegial Support | 96-98 | SCS | 3.84 | 3.99 | 0.15 | -1.327 | 7 | 0.226 |
| Teacher Collegial Support | 98-00 | SCS | 3.70 | 3.95 | 0.25 | -4.316 | 11 | 0.001 |
| Teacher Collegial Support | 96-00 | SCS | 3.76 | 3.96 | 0.20 | -3.765 | 19 | 0.001 |
| Teacher Collegial Behavior | 98-00 | OCDQ-RM | 2.74 | 2.81 | 0.07 | -1.798 | 11 | 0.100 |
| Teacher Committed Behavior | 98-00 | OCDQ-RM | 3.05 | 3.17 | 0.12 | -3.302 | 11 | 0.007 |
| Teacher Disengaged Behavior # | 98-00 | OCDQ-RM | 1.72 | 1.45 | -0.27 | 4.213 | 11 | 0.001 |
| Teacher Affiliation | 98-00 | OHI-M | 3.17 | 3.33 | 0.16 | -4.574 | 11 | 0.001 |
| Positive Learning Climate | 96-98 | SAQ | 2.41 | 2.14 | -0.27 | 2.968 | 7 | 0.021 |
| Positive Learning Climate | 98-00 | SAQ | 3.46 | 3.54 | 0.08 | -1.173 | 11 | 0.266 |
| Positive Learning Climate | 96-00 | SAQ | 3.04 | 2.98 | 0.06 | 0.956 | 19 | 0.351 |
| High Expectations | 96-98 | SAQ | 2.44 | 2.21 | -0.23 | 2.484 | 7 | 0.042 |
| High Expectations | 98-00 | SAQ | 3.46 | 2.52 | 0.06 | -1.085 | 11 | 0.301 |
| High Expectations | 96-00 | SAQ | 3.05 | 3.00 | -0.05 | 0.954 | 19 | 0.352 |
| Dedicated Staff | 98-00 | SAQ | 3.83 | 4.00 | 0.17 | -3.312 | 11 | 0.007 |
| Teacher Decision Making | 96-98 | SPES | 2.97 | 3.21 | 0.24 | -2.232 | 7 | 0.061 |
| Teacher Decision Making | 98-00 | SPES | 2.98 | 3.13 | 0.15 | -3.609 | 11 | 0.004 |
| Teacher Decision Making | 96-00 | SPES | 2.98 | 3.16 | 0.18 | -3.853 | 19 | 0.001 |
| Teacher Prof. Growth Opportu. | 96-98 | SPES | 3.96 | 4.13 | 0.17 | -1.358 | 7 | 0.217 |
| Teacher Prof. Growth Opportu. | 98-00 | SPES | 3.98 | 4.08 | 0.10 | -2.416 | 11 | 0.034 |
| Teacher Prof. Growth Opportu. | 96-00 | SPES | 3.97 | 4.10 | 0.13 | -2.411 | 19 | 0.026 |
| Teacher Peer Status/Respect | 96-98 | SPES | 4.15 | 4.25 | 0.10 | -1.001 | 7 | 0.350 |
| Teacher Peer Status/Respect | 98-00 | SPES | 4.21 | 4.20 | -0.01 | 0.209 | 11 | 0.838 |
| Teacher Peer Status/Respect | 96-00 | SPES | 4.18 | 4.22 | 0.04 | -0.868 | 19 | 0.396 |
| Teacher Work Autonomy | 96-98 | SPES | 3.68 | 3.77 | 0.09 | -0.634 | 7 | 0.546 |
| Teacher Work Autonomy | 98-00 | SPES | 3.73 | 3.69 | -0.04 | 0.861 | 11 | 0.408 |
| Teacher Work Autonomy | 96-00 | SPES | 3.71 | 3.72 | 0.01 | -0.189 | 19 | 0.852 |
| Teacher Impact on School Life | 96-98 | SPES | 4.10 | 4.18 | 0.08 | -0.881 | 7 | 0.408 |
| Teacher Impact on School Life | 98-00 | SPES | 4.15 | 4.15 | 0.00 | 0.238 | 11 | 0.817 |
| Teacher Impact on School Life | 96-00 | SPES | 4.13 | 4.16 | 0.03 | -0.761 | 19 | 0.456 |

| Pedagogical Variables | Group | Source | Pre | Post | +/- | t | df | Sig. |
|----------------------------------|--------------|---------------|------------|-------------|------------|----------|-----------|-------------|
| Academic Emphasis | 98-00 | OHI-M | 2.57 | 2.99 | 0.43 | -9.395 | 11 | 0.000 |
| Vert/Horiz Curricul.Articulation | 96-98 | SAQ | 2.17 | 2.17 | 0.00 | 0.019 | 7 | 0.985 |
| Vert/Horiz Curricul.Articulation | 98-00 | SAQ | 3.65 | 3.81 | 0.17 | -2.867 | 11 | 0.015 |
| Vert/Horiz Curricul.Articulation | 96-00 | SAQ | 3.06 | 3.16 | 0.10 | -2.139 | 19 | 0.046 |
| Early Identif. Special Needs | 96-98 | SAQ | 2.33 | 2.00 | -0.33 | 2.320 | 7 | 0.053 |
| Early Identif. Special Needs | 98-00 | SAQ | 3.59 | 3.88 | 0.29 | -3.543 | 11 | 0.005 |
| Early Identif. Special Needs | 96-00 | SAQ | 3.09 | 3.13 | 0.04 | -0.418 | 19 | 0.681 |
| Frequent Monitoring Stu./Inst. | 96-98 | SAQ | 2.36 | 2.11 | -0.26 | 4.362 | 7 | 0.003 |
| Frequent Monitoring Stu./Inst. | 98-00 | SAQ | 3.42 | 3.69 | 0.27 | -3.607 | 11 | 0.004 |
| Frequent Monitoring Stu./Inst. | 96-00 | SAQ | 3.00 | 3.05 | 0.06 | -0.764 | 19 | 0.454 |
| Resource Support Class Materials | 98-00 | OHI-M | 2.78 | 2.97 | 0.19 | -4.119 | 11 | 0.002 |
| Teacher Self-Efficacy Stu. Lrng. | 96-98 | SPES | 4.20 | 4.29 | 0.09 | -0.974 | 7 | 0.363 |
| Teacher Self-Efficacy Stu. Lrng. | 98-00 | SPES | 4.25 | 4.24 | -0.02 | 0.534 | 11 | 0.604 |
| Teacher Self-Efficacy Stu. Lrng. | 96-00 | SPES | 4.23 | 4.26 | 0.03 | -0.633 | 19 | 0.534 |
| Stu. Engaged High-Order Lrng. | 96-98 | IPI-6 | 15.63 | 28.00 | 12.38 | -3.246 | 7 | 0.014 |
| Stu. Engaged High-Order Lrng. | 98-00 | IPI-6 | 17.92 | 25.25 | 7.33 | -3.978 | 11 | 0.002 |
| Stu. Engaged High-Order Lrng. | 96-00 | IPI-6 | 17.00 | 26.35 | 9.35 | -43898 | 19 | 0.000 |
| Stu. High-Order Lrng. Conversat. | 96-98 | IPI-5 | 3.63 | 1.38 | -2.25 | 1.350 | 7 | 0.219 |
| Stu. High-Order Lrng. Conversat. | 98-00 | IPI-5 | 3.67 | 2.25 | -1.42 | 1.445 | 11 | 0.176 |
| Stu. High-Order Lrng. Conversat. | 96-00 | IPI-5 | 3.65 | 1.90 | -1.75 | 2.018 | 19 | 0.058 |
| Teacher-Led Instruction | 96-98 | IPI-4 | 42.75 | 41.88 | -0.88 | 0.213 | 7 | 0.837 |
| Teacher-Led Instruction | 98-00 | IPI-4 | 27.00 | 36.92 | 9.92 | -3.775 | 11 | 0.003 |
| Teacher-Led Instruction | 96-00 | IPI-4 | 33.30 | 38.90 | 5.60 | -2.222 | 19 | 0.039 |
| Stu. Seatwork Teacher Engaged | 96-98 | IPI-3 | 23.38 | 18.88 | -4.50 | 1.503 | 7 | 0.177 |
| Stu. Seatwork Teacher Engaged | 98-00 | IPI-3 | 21.83 | 19.33 | -2.50 | 2.236 | 11 | 0.047 |
| Stu. Seatwork Teacher Engaged | 96-00 | IPI-3 | 22.45 | 19.15 | -3.30 | 2.456 | 19 | 0.024 |
| Stu. Seatwork Tchr not Engaged | 96-98 | IPI-2 | 11.13 | 7.25 | -3.88 | 1.404 | 7 | 0.203 |
| Stu. Seatwork Tchr not Engaged | 98-00 | IPI-2 | 23.83 | 11.17 | -12.67 | 4.503 | 11 | 0.001 |
| Stu. Seatwork Tchr not Engaged | 96-00 | IPI-2 | 18.75 | 9.60 | -9.15 | 4.155 | 19 | 0.001 |
| Student Disengagement | 96-98 | IPI-1 | 4.00 | 2.63 | -1.38 | 1.487 | 7 | 0.181 |
| Student Disengagement | 98-00 | IPI-1 | 5.75 | 5.17 | -0.58 | 0.249 | 11 | 0.808 |
| Student Disengagement | 96-00 | IPI-1 | 5.05 | 4.15 | -0.90 | 0.630 | 19 | 0.536 |
| Student Higher-Order Learning | 96-98 | IPI-5&6 | 19.25 | 29.38 | 10.13 | -2.694 | 7 | 0.031 |
| Student Higher-Order Learning | 98-00 | IPI-5&6 | 21.58 | 27.50 | 5.92 | -2.805 | 11 | 0.016 |
| Student Higher-Order Learning | 96-00 | IPI-5&6 | 20.65 | 28.25 | 7.60 | -3.898 | 19 | 0.001 |
| Stu Hig-Ord Lrng/Tchr.-Led Inst. | 96-98 | IPI-4&5&6 | 62.00 | 71.25 | 9.25 | -2.595 | 7 | 0.036 |
| Stu Hig-Ord Lrng/Tchr.-Led Inst. | 98-00 | IPI-4&5&6 | 48.58 | 64.42 | 15.83 | -7.404 | 11 | 0.000 |
| Stu Hig-Ord Lrng/Tchr.-Led Inst. | 96-00 | IPI-4&5&6 | 53.95 | 67.15 | 13.20 | -6.593 | 19 | 0.000 |
| Tchr Led Inst/Stu Seatwork w/tch | 96-98 | IPI-3&4 | 66.13 | 60.75 | -5.38 | 1.667 | 7 | 0.139 |
| Tchr Led Inst/Stu Seatwork w/tch | 98-00 | IPI3&4 | 48.83 | 56.25 | 7.42 | -4.277 | 11 | 0.001 |
| Tchr Led Inst/Stu Seatwork w/tch | 96-00 | IPI3&4 | 55.75 | 58.05 | 2.30 | -1.067 | 19 | 0.299 |
| Student Seatwork | 96-98 | IPI-2&3 | 34.50 | 26.13 | -8.38 | 2.298 | 7 | 0.055 |
| Student Seatwork | 98-00 | IPI-2&3 | 45.67 | 30.50 | -15.17 | 5.579 | 11 | 0.000 |
| Student Seatwork | 96-00 | IPI-2&3 | 41.20 | 28.75 | -12.45 | 5.509 | 19 | 0.000 |
| Stu.Seatwork/Stu.Disengagement | 96-98 | IPI-1&2&3 | 38.50 | 28.75 | -9.75 | 2.720 | 7 | 0.030 |
| Stu.Seatwork/Stu.Disengagement | 98-00 | IPI-1&2&3 | 51.42 | 35.67 | -15.75 | 7.231 | 11 | 0.000 |
| Stu.Seatwork/Stu.Disengagement | 96-00 | IPI-1&2&3 | 46.25 | 32.90 | -13.35 | 6.678 | 19 | 0.000 |
| Stu.Seatwork w/o Tchr./Stu. Dis. | 96-98 | IPI-1&2 | 15.13 | 9.88 | -5.25 | 1.829 | 7 | 0.110 |
| Stu.Seatwork w/o Tchr./Stu. Dis. | 98-00 | IPI-1&2 | 29.58 | 16.33 | -13.25 | 7.111 | 11 | 0.000 |
| Stu.Seatwork w/o Tchr./Stu. Dis. | 96-00 | IPI-1&2 | 23.80 | 13.75 | -10.05 | 5.593 | 19 | 0.000 |

Group: Defines Cohort by Year e.g. 1996-1998, 1998-2000, 1996-1998 and 1998-2000. Source: SCS: School Culture Survey; SAQ: Staff Assessment Questionnaire; SPES: School Participant Empowerment Scale; OCDQ-RM: Organizational Climate Description Questionnaire-Revised Middle; OHI-M: Organizational Health Inventory-Middle; IPI: Instructional Practices Inventory. Pre/Post: Means for each variable; Change: Difference in Means. See www.MLLC.org for detailed descriptions and appropriate author contact information for use of the data collection instruments used in Project ASSIST.