The purpose of this study was to determine whether the more stringent practices and processes associated with school improvement and effectiveness efforts are at odds with those more collegial and interpersonal relationships associated with organizational humanism. Using School Culture Survey data from 223 public schools, the relationship was tested using a representative sample of middle schools across the state of Missouri. Structural Equation Modeling was the primary statistical method employed to take account of the many complicated and heavily interrelated educational factors at play as school leaders attempt to effect their instructional improvement aims. The findings from the study suggest that the practices associated with rational and stringent organizational accountability are not negatively related to humanistic instructional reform practices. As a result, school leaders may find occasion for enhanced flexibility in their governance philosophies. To date, very little has been written about the marriage of technical and humanistic reform efforts. Breaking new ground, this paper offers a humanistic rationality conceptualization of school improvement that incorporates the demands of excellence with the cultivation of collegial and caring educational settings. Adopting such a tact, school leaders may considerably bolster school effectiveness efforts for their respective buildings.

Introduction

The No Child Left Behind accountability era has left school leadership teams strained, agitated, and more narrowly focused on standardized test performance. Indeed, the philosophies of school leaders on how to best educate their students has come into direct conflict with rigidly exacting bottom-line demands from state and federal education departments. At issue, therefore, is whether the school improvement and effectiveness initiatives tailored in public schools are too narrowly fixed upon standardized achievement. Were this the case, instructional leaders would have very little room to offer their own creative input. The means of formulating building level instructional improvement objectives tend to be highly standardized. Moreover, school leaders' concerted efforts to efficiently and expeditiously achieve Adequate Yearly Progress are also unavoidably mechanistic in nature.

To appropriately study the incorporation of the instructional and curricular treatments in public schools of all types requires a thorough understanding of the nature and extent of the organizational learning in these educational settings. There is no singular or otherwise terse means by which to characterize organizational learning. Organizational learning ultimately involves the accumulation of meaningful knowledge over time. This knowledge can be applied more productively, and to the benefit of the organization, if it is widely diffused throughout the entire organization (Buchel & Probst, 2000). Such a diffusion of the information and knowledge that contributes to organizational learning can be accomplished by transactive communications among organizational members (Anand, Manz, & Glick ,1998). Interpersonal communication

can allow for the more effective use of soft knowledge, while enabling institutional members to more intuitively address organizational challenges (Anand et al, 1998).

The current organizational learning research largely focuses on decision-making and choice. (Bontis, et al, 2002). The more dated, yet seminal work of authors such as Herbert Simon (1952) suggest that "there are a great many things that can be said about organization in general, without specification of the particular kind of organization under consideration" (p. 1130). This contention appears to hold true for schools, which are institutions not unlike the many other organizations studied in organizational analysis and learning. As such, a consideration of the literature on organizational learning in the private sector can prove to be useful for school settings, as well.

While many administrative teams take the lead in both crafting and overseeing the instructional reform plans, it is without exception that teachers will remain the front-line implementers in bringing about such change. These educators are, therefore, the determining factor in the success of reforms because it is only they who can translate reform goals into reform results. The acquisition and synthesis of building-level data that is voluminous but unstructured can be of very little use to instructional leaders. More problematic is the false sense of progress that comes from being armed with mounds of instructional improvement information on teaching practices and student outcomes that tells faculties much too little about where they have gone right and where room for improvement remains. Without the proper empirical focus that links pedagogy with the

changed nature of student engagement designed to power test score growth, reform efforts can quickly become disoriented and wayward.

The extent to which the organizational routines and protocols comport with the environmental context that demands such organizational evolution might ultimately dictate the extent to which organizational learning and change is affected. The applicability to public educational settings is again unmistakable. With the remarkable changes found in today's global society, the instructional demands that confront educators will only grow more exacting. As teachers have grown fixed in their outmoded ways, an organizational response to the instructional improvement data becomes vitally necessary. Meaningful instructional change requires informed school improvement efforts that blend rational goal setting with the more fragile and complex aspects of collaborative strategies to attain these end reform goals. Fostering organizational change by employing proven empirical reform strategies is not only a worthy mission, but an indispensible element of bringing about the fullest forms of instructional improvement geared toward meeting the demands of the present day.

1: Theoretical Framework

1a: Teacher Morale, Satisfaction, and Influence in Improvement Planning

Little question exists that organizations center around people. Even the most detached and mechanistic goal attainment strategies within institutions are launched, guided, and achieved by its people. Rarely are organizational leaders able to determine desirable objectives, nor are they able to regularly execute these goals unilaterally. Instead, institutional members dispersed throughout the organization must work with at

least some semblance of harmony on task objectives. Such collaborative efforts at goal accomplishment can serve to strengthen organizational health and capability (Deng & Tscale, 2003). Leaders must often reflect on what has been, and must be, accomplished within their organization. As such, reflection allows leaders to explicitly consider planning strategies tailored toward prospective organizational goals (Raelin, 1997). Furthermore, leaders must retain a humanistic appreciation of the morale and satisfaction of employees if they are to prevent the departure of dissatisfied organizational members. Organizational research and governance under the humanistic rationality lens would entail the stipulation that goals and organizational learning must be advanced and accomplished in a fashion that is amenable to all school members.

1b: Social Trust and Social Capital

The extent to which organizational members possess cohesive and healthy relationships is an important empirical question. Within the school setting, Bowen, Ware, Rose & Powers (1999) argue the importance of the relationships of school members and their interactions and approaches to problem solving, as school faculty commonly network and learn in teams. Although the end objective of organizational learning might be heightened organizational performance, the means by which such objectives are broached can also affect employee morale, well-being, and efficacy levels (Bowen et al, 1999). Griffith (2003) notes, for instance, that a key to school effectiveness is social trust, in which trusting and cooperative relationships are formed within the school setting. Hence, while sound organizational objectives and clearly delineated goals might be necessary and desirable components of organizational learning, employee-level factors such as social capital (Leana & van Buren, 1999) might also dictate the extent to

which information is channeled throughout the organization. The extent to which instructional leaders identify levels of trust and social capital during full-scale reforms is an important variable to test relative to the overall success school leaders' encounter with the IPI program.

1c: Beyond a Holistic Operational Rationality Approach

Important is Simon's (1978) contention that a consideration of rational behavior, at the wider organization level, will be misguided without a healthy consideration of the characteristics of the rational actors within such organizations. In no setting is this truer than in the nation's public schools. The most meticulously planned and expertly guided reform goals are only as good as the faculty members who ultimately place these organizational change plans into action within their classrooms. As it applies to public schools, formal and routine assessment of standards and expectations must be monitored internally, but also as they are perceived by external stakeholders. Ultimately, the "process of improving organizational actions through knowledge and understanding" constitutes the essence of organizational learning (Edmunson, 2002).

1d: Learning Teams as Creative Thinking Units and Democratic Elements

As has been demonstrated, organizational learning need not be restricted to the governance segment of the organization, but rather can occur within learning teams or other holographic subunits (March, 1991). Edmonson (2002) notes that "team learning has been defined as a process in which a team takes action, obtains and reflects upon feedback, and makes changes to adapt or improve" (p. 129). While learning teams are considered to be peripheral to the organization, it remains the case that "peer group and

peer discussion facilitate strategic learning," which is inextricably a part of the organization (Kuwada, 1998, p. 725). In organizations that devolve autonomy to such groups, these groups will enjoy the freedom to determine goals, means and criteria for task execution (March, 1991). Additionally, it has been determined that such functional subunits contribute more to organizational learning when more organizational units develop uniform comprehensions of the mission and operating environment (Huber, 1991). Given the tenable size of the subunits, this remains distinctly possible.

The benefits of teaming are readily observable in public school settings. Building-wide reforms somewhat complicate the consideration of learned instructional improvement. That is, the importance of securing faculty-wide buy- in and input does not mean the process need be faculty wide in scale. Size matters in garnering widespread approval of the program. Conversely, entire faculties are too unmanageable in size to attack these reform objectives in concert. Teacher teaming, for instance, can be vitally important to determining school effectiveness and progress. When constituted appropriately, workgroups or other organizational teams allow for convergence upon a "shared understanding of what is possible and individuals attempt to enact that possibility" (Crossan, Lane, & White, 1999, p. 528). In public schools, where faculties not only share ideas, but also cohorts of students, such collaboration is critically important. The extent to which instructional weak spots are diagnosed and corrected allows for future reform efforts that are more reliably informed. Instructional leaders then have at their fingertips the types of additional information that allows them to plan

around the instructional methods proven to work within their buildings while avoiding those practices that become exposed as reform pitfalls.

1e: Teacher Autonomy in Teamed Settings: Prior Success with School Initiatives

The extent to which organizations accumulate knowledge is partially dependent upon pre-existing levels institutional knowledge. Organizational repetition based upon such knowledge can yield proficient operational functionality. Organizations benefit from iterative approaches to task accomplishment, as this leads to improvements in performance (Levinthal & March, 1993). Weick (1991) similarly argues that organizations undertake identical efforts to distinctive challenges because they are accustomed to successful problem solving under a certain framework. Organizational leaders oftentimes function by drawing upon knowledge of current operational practices, which take the form of standard operating practices and other routinized activity (Huber, 1991). Best instructional practices in classrooms must be melded with distinctive teaching styles and needs that can vary considerably from one classroom to the next. Unlike most private sector outfits, therefore, the underlying mission of producing educational excellence must not be forced upon educators with plans that require exactingly identical instructional methods across all classrooms.

1f: Staff Development as Enhanced Faculty Empowerment and Discretion

A "one-size fits all" prescription for such an organizational environment is not desirable. Indeed, the organizational action must be grounded in knowledge that is idiosyncratic to the organization (Zander & Kogut, 1995), reflecting the school's specific history and experiences. Bartlett notes that "top-level managers are primarily the creators of the organizational purpose and the challengers of the status-quo, middle level

managers are the horizontal integrators of strategy and capabilities, and the front-line managers are the organizational entrepreneurs" (Bartlett & Ghoshal, 1993, p. 23). This is analogous to the central office, administrators, and teachers within schools. As Woodman, Sawyer & Griffin (1993) argue, "the probability of creative outcomes may be highest when leadership is democratic and collaborative, structure is organic rather than mechanistic, and groups are composed of individuals drawn from diverse fields or functional backgrounds" (p. 302), this is strongly suggestive of the importance of both the rational and the human elements of organizational learning in today's public school systems.

In schools, the momentum that can arise from initial instructional success is not enough to power these reforms to completion. Only when instructional leaders collect and process information on the reform efforts can their practices be more intelligently guided. With the lofty benchmarks crafted in the wake of school improvement efforts, determined reform efforts must also be well-informed enterprises. With this in mind, the place for both small and large group faculty development sessions is clear. Faculty learning capabilities are, after all, cultivated when instructional leaders are given an appropriate venue to share knowledge and learning experiences as the instructional reform efforts continue to evolve over time.

1g: A Structural Consideration of (Humanized) Organizational Learning

If one adopts Schon's (1983) definition of significant organizational learning as consequential changes in the values and the underlying structure of the organization, the conceptual consideration of organizational learning would suggest that a social

infrastructure amenable to learning and change must be existent if such learning is to occur and materially impact organizational effectiveness. While a more formal apparatus can be constructed to process information and knowledge management, the social system within organizations can just as easily shape the nature and extent of organizational learning (Schon, 1983).

Schools, not unlike organizations in the private sector, have been forced to evolve if they expect to survive in the exacting environments in which they operate (Kuwada, 1998). While public sector organizations do not compete as vigorously as their counterparts in the private sector, they too face impending extinction if they remain inert. The prospect of the reconstitution of public schools, for instance, affects how and what schools organizationally learn, as well as how they execute such intelligence so as to actualize their goals. This all unfolds with an urgency that influences a leadership psychology with a results-oriented slant to ensure organizational survival.

1h: Teachers and Students as Principal Stakeholders in Effective Schooling

The unit of analysis to be employed in organizational learning is a vitally important consideration of the researcher. Simon (1952) suggests that "human organizations would seem to qualify to a high degree as suitable units defining a level of analysis of systems of human behavior" (p. 1131). The researcher would be remiss if he disregarded Buchel's contention that it is the people within the organization, and their underlying and idiosyncratic motives and values that centrally comprise organizational learning. Similarly, Bartlett & Ghoshal (1993) argue that while organizational learning has conventionally focused on the formal structure of organizations, the social structures

also warrant consideration, as organizational learning ultimately involves coalitions of participants that have disparate goals and orientations within the organization that but dynamically negotiate their objectives.

1i *Evaluation, Innovation, and Task Devolution Made Humanistic*

Organizational learning in the contemporary era invariably involves the incorporation of data and information systems. In the 21st century information age, organizational learning must be considered in the context of this new and rapidly evolving environment. Schools are no exception, of course, as standardized test performance data is now not only desired at the aggregate level, but disaggregated to track subgroup, and even individual student progress. Incorporating information systems that enable organizational leaders to digest complex information mitigates the possibility that the organization undertakes blind trial-and-error learning, as documented by Van de Ven & Polley (1992). As organizations must rapidly plan and instantaneously adjust, it is not just information, but the possession of the right information, that can determine the extent of organizational learning and evolution (Van de Ven & Polley, 1992).

Organizational learning is commonly encouraged by those members within the institution that seek to align certain organizational objectives with the distinctive environmental demands. The informatics associated with organizational learning, while rational and highly technical, is not devoid on human intuition. This is particularly true of schools, which tend to be more humanistic organizations than their counterparts in the private sector. As schools can represent learning organizations, it is important to remember that it is the institutional members, and not the organization itself, that is responsible for both initiating and engaging in such learning efforts (Valentine, 2005;

2006;2007). Furthermore, the knowledge acquired by organizational mechanisms is socially mediated (Smith, 2003). Such knowledge can then be used to discretionarily devolve power to those organizational members closest to the issues that are to be addressed (Bartlett & Ghoshal, 1993). School leaders acquire, process, and act upon information in an attempt to better their instructional environment. These instructional leaders base this action on the institutional information that allows them to ascertain what must be changed in their building and how this is to be most swiftly and completely accomplished. Though data driven in their focus, the underlying humanistic tact and interpersonal component to these objectives should not be overlooked.

1k: Goal Setting and the Execution of Building-Level Initiatives

The possession of information, regardless of its quantity or quality, is of little benefit to an organizational that does not incorporate such knowledge into appropriately actionable learning. Daft & Weick (1984) note that "learning…is distinguished from interpretation by the concept of action. Learning involves a new response or action based on interpretation" (p. 286). The process of organizational learning can involve tensions between subjective discretionary desires and a more bottom-line assessment of such organizational data and knowledge. The interpretation of the data gathered and knowledge gleaned amounts to a condition whereby "data are given meaning" (Daft & Weick, 1984, p.286). Nevertheless, schools are places where highly ambitious instructional reform goals go largely unmet. School leaders who install a vision for instructional change have only positioned their buildings for the prospect of meaningful reform. Delivering on the vision requires structured action plans that put into effect the distinctive faculty and institutional needs of their schools. Over time, teachers acquire

and act upon information in ways that informs their learning and fosters long run instructional excellence. Fusing data-driven goals with practices and processes that foster enthusiasm and cultivate faculty talents reveal the potential harmony of rational planning and humanistic application of such goals at the building level.

1l: Innovative Experimentation with School Initiatives

It is oftentimes organizational leadership that ultimately spearheads learning and improvement efforts. To this end, organizational leaders, be they managers in the private sector or school administrators, "literally must wade into the ocean of events that surround the organization and actively try to make sense of them. Organizational participants physically act on these events…." (Daft and Weick, 1984, p. 286). It is not uncommon for the organizational leaders to seek to alter the environmental landscape in which they operate, in an attempt "to transform confusing, interactive environments into less confusing, less interactive ones by decomposing domains and treating the resulting sub domains as autonomous" (Levinthal & March, 1993, p 97). If the organization is to ultimately advance beyond status quo operational functionality it must acquire and employ new information and institutional knowledge. To simultaneously propel and guide school reform initiatives invariably requires rational goal planning that keeps faculties attuned to the mission at hand. Doing so in ways that account for the humanistic component of these long-term, highly intimate professional endeavors may, however, provide sorely needed thrust to programs that too typically fall flat across the nation's schools.

1m: Summarizing the Theory and Literature

Public schools are often not only big places, but busy ones, too. As the stakes for public education have been heightened considerably in the accountability era, efforts to change the nature and quality of instruction are oftentimes hurried and multidimensional. Educators who grasp instructional change in the context of the broader organizational settings under which it unfolds are able to more completely observe and assess the progress of their educational reform efforts. The literature base on organizational learning, when fused with educational change theory, places the complex interplay of variables, goals, and reform practices into more pragmatic operational terms.

A firm grounding in the literature review can thread the theoretical discussion of instructional improvement to the empirical findings that demonstrate the strategies and methods proven to be the most effective in advancing instructional improvement aims. Next, it becomes important to structure a discussion that bridges what is shown to work in the nation's public school classrooms with the well-established research and theory that serves to both substantiate and explain what the numbers alone cannot. Organizational change is not a new concept to the world of public education. Treated as complex institutions for decades, public schools have been the subject of critical scholarly research that has become increasingly searching over the years. Distilling the wider body of literature into more structured theoretical terms allows for the resulting findings of the study to be more actionably applied at the building level.

A sound starting point of the inquiry involves appreciating organizational change within the school building as a data-driven learning process for faculties. It is, of course, administrative teams that are tasked with overseeing these instructional improvement initiatives. In this respect, reforming classroom pedagogy and remolding the shape of

student engagement requires heavy doses of experimentation and recalibration. Efforts at lasting instructional reform become more manageable when the underlying change processes are understood under the more global organizational learning theories that explain the fluid universe of these change initiatives. Alternative approaches which focus on implementing and cultivating instructional improvement efforts with a more simplistic, exclusive focus on the reform method will ultimately obscure the nature of these processes at the building level.

2: Methods

Research Questions:

In an effort to probe the relationship between the more rational and protocol-oriented school practices and processes with those that involve heightened levels of collegiality and interpersonal communication, the following research questions were designed to guide further statistical exploration in this paper:

1) What is the relationship between latent factors of school culture and school improvement that represent rational, technical means of approaching school improvement and effectiveness efforts on measurable School Culture Survey responses?
2) What is the relationship between latent factors of school culture and school improvement that are defined as interpersonal, humanistic approaches school improvement and effectiveness efforts on measurable School Culture Survey responses?
3) What is the relationship between the rational latent factors and the humanistic latent factors that are constructed with the Structural Equation Modeling statistical framework?

Survey Research Instrumentation: The School Culture Survey

The six factors of the School Culture Survey (SCS) are identified as: (1) Collaborative Leadership, (2) Teacher Collaboration, (3) Professional Development, (4) Unity of Purpose, (5) Collegial Support, and (6) Learning Partnership. The SCS consists

of 35 Likert-type questions with the following six accompanying response options to be selected by the survey respondents: “strongly disagree”, “disagree”, “somewhat disagree”, “somewhat agree”, “agree”, and “strongly agree.” The six SCS factors that comprise SCS all employ this scale. Simply put, the higher the score that the respondents assigned to respective factors of the SCS, the greater was the respondents’ confirmation of those factors presence within their respective schools.

An analysis of the data associated with the School Culture Survey (SCS) reveals differences in the pre and post mean scores for the five SCS culture variables, teacher collaboration, unity of purpose, professional development, collegial support, and learning partnership, were significant. Teacher Collaboration measures the degree to which “teachers engage in constructive dialogue that furthers the educational vision of the school” and 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 (Gruenert & Valentine, 1998). Understanding the school’s common mission and working toward accomplishment of that mission was analyzed by the “Unity of Purpose” variable. 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” Gruenert & Valentine, 1998). 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 populations. Ultimately, an analysis of the accumulated School Culture Survey data affirmed that school leaders who are focused mission, and who employ a more collaborative and collegial effort to accomplish that mission, will be more successful.

Hoy's School Organizational Climate Description Questionnaire comprised and informed various sections of the School Culture Survey. Hoy identifies six dimensions of the OCDQ:

(1) Supportive principal behavior
(2) Directive principal behavior
(3) Restrictive principal behavior
(4) Collegial teacher behavior
(5) Committed teacher behavior
(6) Disengaged teacher behavior

(Source: Wayne Hoy Personal Website)

Features of Hoy's Organizational Health Inventory (OHI) for Middle Schools were also incorporated into the study to glean the extent to which the wider organizational integrity of the school is evidenced from a battery of questions that probe organizational health. Hoy defines healthy schools educational settings "in which the institutional, administrative, and teacher levels are in harmony; and the school meets functional needs as it successfully copes with disruptive external forces and directs its energies toward its mission." Hoy provides definitions for the seven subsets he has identified as undergirding the OHI instrumentation:

(1) Institutional Integrity
(2) Collegial Leadership

(3) Consideration
(4) Principal Influence
(5) Resource Support
(6) Teacher Affiliation
(7) Academic Emphasis

(Source: Wayne Hoy Personal Website)

Population Sample

The School Culture Survey (SCS) was sent to all public middle schools in Missouri. The response rate was sufficiently robust to ensure that a representative sample of Missouri public middle schools were included in the study. Furthermore, the data from the 224 respondents is also sufficiently large to ensure that more demanding statistical methodologies such as Structural Equation Modeling do not face model convergence complications.

Structural Equation Modeling

Structural Equation Modeling represents a statistical methodology that can accommodate the scope and breadth of the above-listed research questions. Simply employing a sophisticated and complex technique is, alone, insufficient to ensure that such research questions are properly addressed. A cautionary note is in order, however, as complex SEM models, when haphazardly constructed and employed, can produce meaningless, or worse yet, deceptive results. SEM was adopted by the researcher in this study for two principal reasons: (1) to measure the many phenomena associated with school culture and effectiveness undertakings that are not readily observable and neatly aggregated into measurable and quantifiable constructs; (2) to offer a methodological means upon which to compare, corroborate, and refine the school culture findings from

the SCS and similar instruments that employ more rudimentary correlation and regression analyses.

SEM, and the LISREL 8.8 software that performs such modeling, enables for relational interactions to be considered not simply in pictorial form, but in a manner that allows for guarded causal postulations to be advanced. While the methodology itself may be of little interest to school leaders or policymakers, the interactions of the many complex and oftentimes confounding building level variables may prove to be of far greater salience to such an audience.

The statistical relationship between the cultural underpinnings of a school, as measured by the latent factors constructed within the SEM models, as well as on the survey items measurable variables acquired from the School Culture Survey, can offer an insightful investigation of the interplay between the more mechanical processes of school effectiveness efforts with the more humanistic attempts to include and empower the wider faculty. These latent factors were subjected to Structural Equation Modeling (SEM) to determine if such factors were directly correlated with, and mutually influential upon, one another. LISREL 8.8 software was employed to perform path analysis on basic measurement models in an effort to determine whether the relationships between the latent and measurable variables were sufficiently strong to enable causal inferences to be postulated with respect to whether the measurable, observed, and prescribed IPI practices directly affected those more imperceptible latent factors.

The import of the SEM methodology for the purposes of the present study involves its statistical power, which enables the researcher to infer causal relationships while testing the relationship of variables to one another simultaneously, as opposed to

running multiple analyses (Byrne, 1998; Conley, Muncey, & You, 2005; Kline, 2005). The latent factors in the SEM model included instructional practices ("Practice"), faculty teaming practices (Teaming), the rigor of academic and professional standards ("Rigor") and the efficacious of school practices and processes ("Efficacy"). These latent factors are linked to measurable indicators that include multiple School Culture Survey (SCS) questions designed to enable the researcher to quantitatively glean information about the schools' cultures, and the educational processes and practices at the building level.

SEM Model Construction

The designated latent factors within the SEM models were constructed to empirically address the theoretically-based research literature on organizational learning. The SEM models incorporated both rational and humanistic components to determine whether humanistic rationality is a tenable lens under which to study organizational learning. More specifically, the school culture survey enabled latent factors that encompass measured SCS questions involving effective practices, teaming, the rigor of the instructional environment/accompanying school improvement initiatives, the efficaciousness of the wider faculty and administration, and the collaboration in activities other than those that incorporate teaming, to be tested under the SEM statistical framework. The designated latent factors, and the accompanying school-level practices and processes that they were constructed to account for, are listed below:

<u>Effective Practices</u>
Technically Compartmentalized Knowledge
Short-lived fads
Extent and appropriateness of action
Teacher retention/dedication to mission
Tangible successes
Prioritization

Duration of change initiatives
Strategic learning based on survival
Organization-wide initiatves
Building Level Process Refinement
Consideration of Performance Data/Evaluation

Teaming
Teaming/Collegiality
De-centralized culture of trust
Structure of learning
Innovation
Teacher student mediation
School communities
Team learning/creative thinking
Level of democracy within school

Rigor of Instructional Environment/Improvement Initiatives
Rigor of information collection
Staff development/improvement meetings
Conflicting Goals
Goal Setting/Building Level Initiatives
School Administrative Competence/Governance

Wider Efficaciousness
Importance placed on teachers
Consideration of individual actors
Communal Improvement
Teacher personal input
Long run planning
Administrator teacher tension/teaching autonomy
Experimentation/Unconventional Thought
Employee Morale/satisfaction
Prior initiatives/school building success

Collaboration
Dissent/Constructive criticism allowed
People-centric educational setting
Key stakeholders – All teachers and children
Faculty enthusiasm
Social trust/social capital collective goal orientation

The Importance of Testable Methods

Placing the discourse of instructional reform in theoretical terms represents the starting point for a more holistic approach to understanding the complex challenges of

full-scale instructional reform. To understand the reality of the inner-workings of instructional improvement requires empirical data that allows processes and organizational factors to be quantified and measured. As a result, both the desirable and undesirable features of instructional reform are identified not simply by their substance, but also according to the magnitude of this change over time. In short, then, the best roadmap for charting and exploring instructional improvement in the context of organizational change and institutional learning involves structuring and testing statistical models on the basis of the best instructional practices, as identified by the literature. Generated from these testable methods can be enhanced levels of instructional change and improvement. Of course, determining whether adequate headway is forged as a result of the apt measurement and explanation of meaningful improvements to classroom quality over time requires rigorous empirical testing.

3: Noteworthy Results

Five latent factors were identified from the education research literature to be predominant components of effective school culture, school improvement, and the everyday functionality of public schools. First, four individual survey questions from the School Culture Survey were assigned to each latent factor. The empiricial information that can be gleaned from this methodologicial configuration is richly illustrative: the relationship of survey factors, as identified by commonly-grouped meaurement survey items, can be tested for correlational magnitude, as well as the extent to which they load onto the respective latent factors relative to other observable indicator variables. The percentage of variation of these indicators that are explained by the latent factor constructs can also be readily determined.

Insert Figure 1 approx. here

The “Survey Items SEM Model” is depicted in Figure One below. Both the “Efficacy” and “Teaming” latent factors exhibited moderate to strong loading magnitudes, while “rigor” and “effectiveness” both contianed only one insignificant loading (dist_curr and strg_dat, respectively). The “Collaboration” latent factor consturct contained two insignificant indicator variable loadings, “t_relat” and “rur_val.”

The significant findings yielded from the SEM SCS Items Model can then be compared with the findings for SCS Survey factors Model that retains an identical latent factor constructs configuration, but instead designates the several idenified survey factors as the indicator variables. The factor model, displayed in Figure Two below, yielded more spurious output. The SCS survey model did not contain a single instance in which an indicator variable loaded onto the latent factor constructs in an exclusively inadmissiable manner. While the SEM model test indicator vairable loadings with respect to each factor, this model testing across two latent factor deisngs to explain dynamically interrelated practice and processses may be the methodological culprit of the model misspecification. In an equilvent model that only linked the survey factor with a single latent factor construct, the model’ factor loadings were considerably more robust, however the RMSEA became elevated, evidencing a value of .015.

Insert Figure 2 approx. here

Determining the nature of the relationship of those factors associated with more mechanistic or routinized demands and the more collegial humanistic factors is of interest in the current study. More specifically, it is desirable to determine whether the conventional study of leadership and school culture is oversimplified. That is, starkly task-driven/protocol oriented or highly interpersonal and collegial may prove to be oversimplified. While it is theorized that schools can be humanistically rational, this may too be called into question were the rational and humanistically-related factors to be negatively correlated or highly weakly correlated with one another.

Table One provides the findings from both the LISREL 8.8 "Survey Items" and "Survey Factors" SEM measurement models that included the "Effective," "Teaming," "Rigor," "Efficacy," and "Collaboration" latent factor constructs. While these measurement models permit a purely exploratory approach to determining the relationship among the factors, it was expected that the "rational," "effective," and "rigor" latent factor constructs would be highly correlated with one another. It was anticipated that moderately correlated with the remaining Teaming, Efficacy, and Collaboration latent factor constructs would be unearthed, as well.

While the moderately strong relationship evidenced between rigor and effectiveness latent constructs, .58, did not evidence a robust t-value when the survey factors were assigned as indicator variables, when survey items were instead used as measurable indicator variables, the correlation was a highly significant .91, with a t value elevated beyond p=.01. The "Efficacy" and "Teaming" latent factor constructs evidenced a moderate to high correlation of .65 between one another, while collaboration and

teaming evidenced a more moderate correlational value of .32. In no instance was any of the latent factor constructs negatively correlated with one another.

Insert Table 1 approx. here

Of perhaps greater interest are the robustly elevated correlations between effectiveness-teaming, rigor-teaming, efficacy-effective, efficacy-rigor, and collaboration-effectiveness. Similarly, for those measurement indicators that represented specific survey items, while not as highly correlated, efficacy-effective and efficacy-rigor latent factor constructs were again found to be moderately positively correlated with one another.

The measurement models, both for the survey factor and survey item-designated indicator variables, evidence relationships that support the contention that rational and humanistic practices can positively coexist within educational settings. It was the case, with some exceptions, that like-kind latent factors (rational and humanistic) were more highly correlated with one another. Across kind (rational-humansitic) latent factors were also positively correlated. Such findings provide evidence that effective school leadership, school improvement initiatives, and school culture studies and treatment designs need not treat rational and humanistic aspects of public school governance as mutually exclusive.

Also of interest is the extent to which the variance of the SCS Survey Items and the SCS Survey Factors models' indicator variables were accounted for by the designated latent factors. As depicted in Table Two, of those factors assigned measureable indicator variables that were survey items, 8 of the 20 had 40% or more of their variance accounted for by their respective latent variable. Similarly, 8 of the 15 latent survey constructs, assigned as measurement models, had greater than 40% of variance accounted for. The percentage of variance accounted for in the survey factor indicator variables was demonstrably greater, with over eighty percent of the variance accounted for in four of the indicator variables. Hence, the measurement models appear to demonstrate robust correlational findings. Moreover, the findings suggest that the models were also soundly constructed and capable of accounting for a significant extent of the measurable variance levels of building-level school leadership and cultural practices.

Insert Table 2 approx. here

4: Discussion

The findings from both the SCS Survey Items and SCS Factors Models reveal the merit in explaining instructional reform under a lens that encompasses both rational and humanistic elements. Indeed, the categorization of leadership styles, and the subsequent study of leadership and school improvement and effectiveness initiatives, represents more than a superficial or esoteric construct. Instead, the findings from the two SEM models provide revealing empirical solutions to the three research questions advanced in this paper. The Survey Items Model provided the greatest evidence of a strong relationship

between measureable levels of rationalistic, rigorous standards for educational effectiveness. So too did the SEM Survey Factors Model evidence indicator variables that loaded significantly unto their respective latent factor constructs. Finally, that the latent factor variables associated with rationalistic processes were positively and significantly correlated with humanistic latent factor constructs provides compelling evidence that two seemingly polar leadership styles and practices are actually quite complimentary of one another.

This paper was designed to present a more complete empirical picture of building-level instructional improvement efforts. Too often, instructional reform is considered with an exclusive focus on the substance of the reform program. Unhelpfully narrow in focus and scope, these methods distort the reality of full-scale instructional reform. This study offers a broader context of organization-wide learning and change. It is under such fluid operational conditions that instructional programs are initiated, adopted and reformed over time. Standing alone, the findings of the study are highly compelling. Indeed, a richer perspective is had as a result of exploring instructional reform in the theoretical context of organizational learning, interpersonal dynamics, and the reform mechanisms employed to negotiate the interplay of operational and cultural components. The reform efforts needed to further these ambitious goals over time are understood in terms of the tangible plans and practices that school leaders can adopt to actualize such goals.

A great many of the findings in the study were both statistically significant and considerable in terms of the strength of the relationships. School faculties, and administrators in particular, are advised to note the finding that educational excellence and collegiality appear to be complementary of one another. In more generalized terms, organization-wide learning in school buildings can be both exactingly rational while entirely humanistic and cooperative. More specifically, the relationship between the rigor associated with the educational environments in which the reforms were fostered was found to be strongly related to school effectiveness. It appears, therefore, that faculties which demand excellence might offer more than a superficial contribution to instructional reform efforts.

Moreover, moderately strong relationships between efficacy and effectiveness suggests that teachers who feel that they are able to effect educational change might be more likely to execute these desired improvement issues. It is as plausible, however, that successful implementation of school effectiveness initiatives might also act to enhance efficacy levels. Not surprising, efficacy levels and teaming practices are found to be related to one another, suggesting to school leaders and faculty that collegial approaches to commonly shared building level priorities can enhance efficacy levels. Again, however, it is entirely conceivable that the enhanced levels might also exhibit positive effects on the effectiveness and impact of teaming practices. At the very least, teaming and collaboration appears to be related to several beneficial effects on measurable components of school improvement initiatives, such as faculty efficacy levels.

The nature and scope of organizational learning is largely, if not entirely, dependent upon the greater external environment in which the organization functions. In an age of global interdependence, schools are greatly affected and challenged by such an environment. It would strain credulity to suggest that as the wider exogenous environment is prone to exponential advances and radical change, schools are inoculated from such turbulence and remain largely stable. As the true test of organizational learning and evolution is organizational survival, it can not be contested that public schools have withstood the test of time. Instead, research on organizational learning must consider the extent to which organizational learning has contributed the survival of these institutions.

Structural Equation Modeling (SEM) was not advertised by the study to be a definitive educational research solution based simply on the sophistication of the model, of course. Such a methodology does, however, offer a more holistic research approach to study educational effectiveness at the school, district, and regional levels. Hence, the methodology itself, and not simply the findings therein, may prove to be especially compelling to educational researchers and policymakers alike.

The findings of the study are especially striking in the current accountability era. More specifically, the output associated with the Structural Equation Modeling appear to corroborate the contention that the rigorous reform practices and processes, as well as ambitious, routinized planning, need not contravene school leaders' attempts at establishing a collegial, humanistic educational setting. The distinction between the mere coexistence of practices and the more potentially potent synergies that underlie these

practices is a consideration worthy of future empirical study. While outside the bounds of the present study, future research in the area of humanistic rationality would benefit from an inquiry that traces the extent to which leaders cultivate collegial, interpersonal environments, but who are also appropriately exacting in their demands for galvanizing school effectiveness, efficiency, and accountability compliance practices and processes. Were resulting student engagement levels and student achievement levels to grow, such a relationship becomes not only better explained but also acts as readily measurable and identifiable initiative for school leaders to make effective use of their reform efforts.

Among the most important components of this study, at least for school leaders, is the practical import of these theoretical findings for educators' daily instructional routines. These instructional leaders will, after all, be guided by what the research illustrates to be effective in transforming instructional and student engagement behaviors. From a testable quantitative standpoint, statistical methods are designed to explore the extent to which hard-line mechanical approaches to reform benchmarks can coexist with the more fully inclusive faculty teaming methods. That is, the interpersonal dynamic of these reform plans greatly govern the extent to which school improvement efforts are effectuated over time. While organizational literature and theory is necessary to explain the "why" of these empirical findings, school leaders are likely to take a keener interest in the "what" and "how much" aspects of the instructional reform priorities and underlying cultural attributes of their schools. The methods of the instructional improvement process will ultimately dictate the shape, progress, and overall effectiveness of instructional improvement initiatives over time.

References

Anand, V, Manz, C.C., and Glick, W.H. (1998). An organizational memory approach to Information management. *The Academy of Management Review*. 23 (4), 796-809.

Bartlett, C.A. and Ghoshal, S. (1993) Beyond the M-Form: Toward a managerial theory of the firm. *Strategic Management Journal,* 14, 23-46.

Bontis, N., Crossan, M.M., and Hulland, J (2002). Managing an organizational learning system by aligning stocks and flows, *Journal of Management Studies,* 39 (4), 437-469.

Bowen, G.L. Ware, W.B., Rose, R.A., and Powers, J.D. (2007). Assessing the functioning of schools as learning organizations, *Children and Schools*, 29(4), 199-208.

Buchel, B. and Probst, G (2000). From organizational learning to knowledge management. 1-12.

Byrne, B. B. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.

Conley, S., Muncey, D.E. & You, S. (2005). Standards-based evaluation and teacher career satisfaction: A structural equation modeling analysis. *Journal of Evaluation Education, 18,* 39-65.

Crossan, M.M., Lane, H.W., & White, R.E. (1999). An organizational learning framework: From intuition to institution. *The Academy of Management Review, 24*(3), 522-537.

Daft, R.L. and Weick, K.E. (1984). Toward a model of organizations as interpretation systems, *The Academy of Management Review*, 9 (2), 284-295.

Deng, P.S. & Tscale, E.G. (2003). A market-based computational approach to collaborative organizational learning. *The Journal of Operational Research Society, 54(9),* 924-935.

Edmonson, A.C. (2002). The local and variegated nature of learning in organizations: A group-level perspective. *Organizational Science, 13(2),* 128-146.

Griffith, J. (2003). Schools as organizational models: Implications for examining school effectiveness. *The Elementary School Journal,* 104 (1), 29-47.

Huber, G.P. (1991) Organizational learning: The contributing processes and the literatures. *Organization Science, 2(1),* 88-115.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.

Kuwada, K. (1998). Strategic reorientation and organizational knowledge. *Organization Science, 9*(6), 720-736.

Leana, C.R., van Buren, H.J. (1999). Organizational social capital and employment practices. *The Academy of Management Practices*, 24 (3), 538-555.

Levinthal, D.A. & March, J. G. (1993). The myopia of learning. *Strategic Management Journal, 14,* 95-112.

March, J. (1991). Exploration and exploitation in organizational learning. *Organization Science, 2*(1), 71-87.

Raelin, J.A. (1997). A model of work-based learning. *Organization Science, 8(6),* 563-578.

Schon, D.A. (1983) The Reflective Practitioner: How professionals think in action. London: Temple Smith.

Simon, H.A. (1952). Comments on the theory of organizations, *The American Political Science Review*. 46 (4), 1130-1139.

Simon, H.A. (1978). Rationality as process and as product of thought. *The American Economic Review*. 68 (2), 1-16.

Smith, P.J. (2003). Workplace learning and flexible delivery. *Review of Educational Research*, 73 (1), 53-88.

Valentine, J. W. (2005). *Instructional practices inventory: Profiling student engagement for school improvement.* Columbia, MO: Middle Level Leadership Center, University of Missouri (www.MLLC.org).

Valentine, J. W. (2007). *The instructional practices inventory: Using a student learning assessment to foster organizational learning*. Columbia, MO: University of Missouri (www.MLLC.org).

Valentine, J.W. (2008) Middle Level Leadership Center (MLLC) Website material published by Director Jerry W. Valentine. University of Missouri.

Van de Ven, A.H. & Polley, D. (1992). Learning while innovating. *Organization Science, 3(1),* 92-116.

Weick, K.E. (1991). The nontraditional quality of organizational learning. *Organization Science, 2(1), 116-124.*

Woodman, R.W., Sawyer, J.E., Griffin, R.W. (1993). Toward a theory of organizational creativity, *Academy of Management Review*. 18 (2), 293-321

Zander, U. and Kogut, B. (1995). Kknowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science*, 6 (1), 76-92.