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School Characteristics Inventory: Investigation of a Quantitative Instrument for Measuring the Modifiability of School Contexts for Implementation of Educational Innovations

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ABSTRACT

In response to the numerous school reform initiatives being implemented, Sternberg proposed a theory of contextual modifiability stating that successful change in a school requires that the school be modifiable. Sternberg developed the School Characteristics Inventory (SCI), a 116-item Likert scale questionnaire, to assess schools' modifiability. The purpose of this study was to conduct a reliability and validity study on the instrument using data from a larger study on the effectiveness of innovations addressing academic diversity. Specifically, the SCI factor structure, item analyses, and validity evidence of the SCI were examined. Six factors (59 items) were extracted and rotated to simple structure, accounting for 42% of the variance across the factor solution. Internal consistency estimates were obtained to assess the reliability of these factors, with coefficient alphas ranging from a low of .76 to a high of .94. The present data give credence to the reliability and validity of the SCI and tentatively support the organizational modifiability construct theorized by Sternberg.

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EXECUTIVE SUMMARY

Introduction

Research on school reform continues to grow as new innovations are proposed and evaluated for effectiveness. However, the results of studies of different innovations in school reform are often inconsistent, as a given intervention might prove to be effective in some school contexts but not others (Watson, 2000). An examination of the school context may be in order. Hence the question of how to bring about school change emerges. What is required of schools to effectively implement and sustain these improvements?

Sternberg's Contextual Theory of Modifiability

Research supports the notion that factors such as school climate, group openness, group trust, and efficacy are important considerations if school reform initiatives are undertaken (Anderson, 1982; Andringa & Fustin, 1991; Bulach & Malone, 1994; Gibson & Dembo, 1984; Hoy & Tarter, 1992; Hoy & Woolfolk, 1993; Kelley, 1980; Sharma, 2001; Watson, 2000). However, these factors may not be sufficient. Sternberg (2000) proposes that attempts at school reform often fail because the schools undergoing the transformations lack the necessary modifiability to effectively implement the reforms. Sternberg's theory of contextual modifiability proposes that successful change in a school *requires* that the school be modifiable in the first place, prior to the implementation of an innovation.

The theory of contextual modifiability centers around two basic kinds of changes: surface-structural change and deep-structural change. On the school level, surface-structural change refers to the mere addition of an intervention to the basic foundation of

the school as it currently exists. The changes are superficial and reflect a school's desire for the *appearance* of change. In contrast, deep-structural change necessitates the complete rebuilding of organizational structures in the school, rather than merely the appearance of change. In addition to a school's openness to change, school efficacy, or the extent to which a school believes it can handle the educational process, influences the degree to which a school is modifiable.

Sternberg (2000) describes eight different types of schools using a mineralogy metaphor based on the various possible combinations of three main factors: actual change, appearance of change, and self-efficacy:

- Rusted Iron: These schools are low in all three areas. There's a sense of hopelessness in these schools, and therefore, the likelihood of either surface-structural and deep-structural change is low.
- Granite: These schools are low in their desire for actual change and the appearance of change, but high in self-efficacy. They don't believe change is needed, and thus, the probability of surface-structural or deep-structural change is low.
- Amber (with internal insects): These schools are low in desire for actual change and self-efficacy, but high in desire for the appearance of change. They feel frustrated by the idea that the school is internally flawed, but don't believe any amount of real reform is possible. Thus, the prognosis for surface change is medium low, and low for deep-structural change.
- Opal: These schools are low in desire for actual change, high in desire for the appearance of change, and high in perceived self-efficacy. They believe that they "look good" and therefore, don't need many changes. The likelihood for structural change in these schools is moderately low, and low for deep-structural change.
- Cubic Zirconium: These schools are low in desire for the appearance of change, low in self-efficacy, yet high in desire for actual change. They tend to ward off visitors (including researchers), lest their flaws be exposed. The prognosis for surface change is moderately low, and for deep-structural change is low.
- Slightly Imperfect Diamond: These schools have a high desire for actual change but a low desire for the appearance of change. They are also high in self-efficacy, and generate a mood of denial. In these cases, the potential for surface-structural change is moderately high, and for deep-structural change is moderately low.
- Lead: These schools exhibit high desire for actual change and the appearance of change, but are low in perceived self-efficacy. They are impatient, hoping for quick fixes and clear results with little or no research. The probability for surface-structural change in these schools is moderately high; for deep-structural change, it's moderately low. If the school can be made to believe in its capability to effect change, the potential for change can be significantly greatened.

- Diamond in the Rough: These schools are high in desire for actual change, appearance of change, and perceived self-efficacy. They are optimistic and confident that change is not only possible in their school, but that change will make their school a better place. They are willing to do what it takes to make their school successful. Obviously, the prognosis for surface-structural and deep-structural change in these schools is high. (pp. 13-19)

Schools and individuals within a school vary on these three factors (desire for actual change, desire for appearance of change, and perceived self-efficacy). In general, higher levels of these qualities result in greater potential for contextual modifiability.

To empirically assess a school's modifiability, a 116-item Likert scale questionnaire was developed by Sternberg. The purpose of this study was to conduct a reliability and validity study on the instrument. This study was part of a larger study on the effectiveness of specific innovations in assisting teachers in addressing academic diversity. However, only the findings of the study investigating the psychometric properties of the instrument are reported in this research monograph.

School Characteristics Inventory (SCI)

Sample

Four hundred fifty-two middle level teachers and administrators (n = 452), representing 60 schools across the nation, participated in the initial development study. A random sample of participants was solicited through The National Research Center on the Gifted and Talented (NRC/GT) Collaborative School District database. Ten copies of the survey, a cover letter, and self-addressed, business reply envelopes were sent to the contact person listed on the database. The contact person was asked to randomly distribute the surveys to middle school teachers and administrators in his/her district. The response rate on returned surveys was 75%.

Instrumentation

Initial SCI. The initial School Characteristics Inventory (SCI) survey contained 116-items that respondents answered on a four-point Likert scale ranging from "not descriptive" to "very descriptive." Respondents were asked how closely descriptive statements applied to their school, the parents and community, the school's administration, the teachers in the school, and the staff (other than administrators and teachers) in the school.

Factor Structure

A principal factors extraction with varimax rotation using SPSS for Windows® 10.1.4 FACTOR subroutine on the initial 116-item questionnaire was completed. Prior to

principal factor analysis, principal components extraction analyses estimated the number of factors, presence of outliers, absence of multicollinearity, and factorability of the correlation matrices. No cases were identified as outliers and all other indications suggested the statistical assumptions were not violated. In cases where there were missing data, the mean response for that particular variable was substituted.

Six factors (59 items) were extracted and rotated to simple structure. These factors, collectively, accounted for 42% of the variance across the factor solution. The six factors (School Reputation, General School State—Negative Orientation, Staff Attitudes/State of Mind—Negative Orientation, Responsiveness to Change—Negative Orientation, General Perceptions of School—Slightly Flawed Orientation, and Administration Responsiveness) were identified and named by referring to those items most clearly defining each factor. A minimum factor saliency criterion of +/- 0.50 (25% of variance) was utilized for this purpose.

SCI Item Analysis

Reliability of SCI scales. To assess the reliability of the factors, internal consistency estimates were obtained for each scale as well as the total scale using the SPSS for Windows 10.1.4® RELIABILITY subroutine. Coefficient alpha ranged from a low of .76 (Responsiveness to Change scale) to a high of .94 (School Reputation SCI and Total Scale). Due to the relatively small number of items in each scale of the SCI each Standard Error of Measurement (SEM) is relatively higher than would be expected for an equivalent but larger number of items of equal quality for each scale. The SEM for the total score was 6.0.

Validity Evidence for the SCI

The intent of this study was to collect validity evidence of the SCI based on the degree that scores obtained from it could be interpreted appropriately. Thus the major question was "What kinds of interpretations can one make based on the results of administration of the SCI?"

Criterion predictive validity. As part of the larger NRC/GT project investigating teachers' willingness to implement differentiated instruction or differentiated authentic assessment, evidence of the SCI's validity was collected by assessing these schools' readiness for adapting an innovation and the teachers' actual adoption of an innovation. Comparison schools did not actively participate in professional development or coaching until after the data collection period was completed. The following section is a summary of the results [expressed in Sternberg's (2000) mineralogy metaphor] of qualitative data collected over the 3-year period of the larger study.

Qualitative Descriptions of Schools

Langley Middle School (Assessment): Softened Granite. The majority of teachers and the administration at Langley Middle School exhibited little desire for actual change

in their beliefs and attitudes about teaching and learning. While some individuals seemed focused on gaining attention for their efforts, equal numbers of others resisted change efforts believing that their existing methods were effective enough. Langley could be described as a softened granite school. It was low in desire for actual change, variable in its desire for the appearance of change, and high in its sense of self-efficacy.

Marshall Middle School (Assessment): Granite. The faculty and school culture at Marshall Middle School communicated little desire to enact deep and substantial change. The teachers at Marshall believed they provided a sufficient instructional program and that the students were well prepared to take state tests. Marshall was a Granite school: low in its desire to enact actual change, low in its desire for the appearance of change, yet strong in its sense of self-efficacy.

Rockford Middle School (Assessment): Rusted Iron. Rockford Middle School served a population of students from mostly economically impoverished backgrounds. Teachers and administrators seemed acutely aware of the school's low status in the district, attributing this to the fact that the students' low standardized test scores. Rockford Middle School could be categorized as a Rusted Iron School. It appeared to be low in desire for actual change, low in desire for appearance of change, and low in self-efficacy.

Howard Middle School (Differentiation): Semi-precious Opal. Howard's school culture seemed to genuinely value change. Some teachers worked through the ambiguity seeking actual change: re-examining current practices and learning new instructional skills. However, other teachers seemed less interested in the hard work and discomfort associated with deep change in the school. Howard could be described as a semi-precious Opal school. It varied in the desire for actual change, yet maintained a powerful image of involvement in the project.

Franklin Middle School (Differentiation): Flawed Amber. The teachers and administration at Franklin Middle School exhibited little desire to enact deep and enduring change in their environment. The faculty identified a fatal flaw to their system—state tests—that if eliminated, might increase their ability to enact more substantial change. Yet, a small pocket of teachers banded together to enact their interpretation of new instructional behaviors. Franklin could be classified as a flawed amber school. It was low in its desire for actual change, divided in its pursuit for the appearance of change, as well as in its sense of self-efficacy.

Greene Middle School (Differentiation): Opal. Greene Middle School was a magnet school located in a suburb of a major eastern city. Surprisingly, at a school where resources were abundant and the student population was largely gifted and talented, school members, including the faculty and the second principal, were not supportive of change. Greene Middle School could be classified as an Opal School. It was clear that the school was low in desire for actual change. Yet it seemed of great importance that the school be perceived as willing to change and as capable of change. Additionally, the

school was very high in perceived self-efficacy; clearly, nearly all members of the Greene community believed strongly that their school was one of the finest in the district.

Haden Middle School (Comparison): Rusted Iron. Haden Middle School was characterized as a rusted iron school. It was low in its desire for actual or even the appearance of change, and maintained a consistently low sense of self-efficacy. From the beginning of the study, the faculty and administration of Haden seemed hostile toward new ideas. Although Haden was eligible to receive professional development services following all data collection, it expressed little interest in the opportunity.

Parkway Middle School (Comparison): Lead or Rusted Iron. Parkway Middle School was a school that was high in desire for actual change and high in desire for appearance of change. However, Parkway appeared to be low in perceived self-efficacy, as nearly all school members mentioned the numerous problems plaguing the school. Parkway Middle School, in some respects, appeared to be a Lead School. The changes that occurred at Parkway were not gradual changes evolving out of careful planning. In other ways, however, Parkway appeared to be more like a Rusted Iron School. Teachers and administrators did not seem to think that a "quick fix" was what their school needed; rather, they recognized the deep structural changes that were needed. But school staff seemed uncertain that they could actually be accomplished.

Cleveland Middle School (Comparison): Diamond in the Rough. Cleveland appeared to be a Diamond in the Rough school. The culture of Cleveland was one eager to implement real change, desirous of the appearance of change, and possessing high self-efficacy. The mood at the school was positive and energetic; both teachers and administrators were open to changing their practices. The principal seemed confident that continual change and progress were the keys to the school's success.

Quantitative Data Collected on SCI Scales

In addition to the qualitative data collected in the schools, teachers in each school completed both the SCI and the Trouble Shooting Checklist (TSC) instruments to assess evidence of criterion concurrent validity of the SCI. This evidence is presented by correlational data between the SCI and the School-based Trouble Shooting Checklist (TSC; Manning, 1976).

Trouble Shooting Checklist (TSC)

The TSC (Manning, 1976) is a paper and pencil instrument designed to measure an organization's potential for successfully adopting and implementing educational innovations. The seven scales of the TSC provide a diagnostic profile that focuses on the readiness of an organization for the adoption and implementation of an innovation. The profile provides areas of strengths and weaknesses in relation to the school's environment, to provide an estimate of the effects of particular variables on the adoption process of an innovation.

Pearson product-moment correlations between scales on the TSC and the SCI suggest that there was a relationship between the teachers' responses on the SCI and their responses on the TSC. The largest correlations were between the TSC Students scale each of the SCI's scales as well as the total TSC scale and each of the SCI scales. The School Reputation scale of the SCI correlated significantly with every scale of the TSC.

Comparison of SCI Qualitative Descriptions and SCI Quantitative Results

As part of the validity study of the SCI, comparison of the qualitative and quantitative data was conducted. While the original SCI survey was modified based on the factor analysis results, we were interested in the degree to which total scores on the SCI ranked ordered schools on the continuum of Rusted Iron (low capacity for modifiability) to Diamond in the Rough (high capacity for modifiability) as originally presented by Sternberg (2000). Based on total SCI scores and the qualitative descriptions, in general, the classification of the type of schools aligned with the rank ordering of the SCI scores. The only exception to this was the classification of Cleveland. Based on Cleveland's SCI scores, they would have been classified as a Granite School. However, based on qualitative data, a Diamond in the Rough classification was assigned.

Discussion

The present data analyses give credence to the reliability and validity of the SCI and tentatively support the organizational modifiability construct theorized by Sternberg (2000). Obviously, these results are only tentative and are in need of replication in other school settings considering adopting an educational innovation. The SCI seems promising as an instrument for measuring the modifiability of a school in regards to adopting and sustaining an educational innovation. However, it is advisable to continue to gather additional data to gauge these same indicators over time as interactions between individuals and their context likely affect continued capacity and willingness to adopt and sustain an educational innovation.

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Introduction

Research on school reform continues to grow as new innovations are proposed and evaluated for effectiveness. Researchers have engaged in on-going investigations regarding the value of new practices, now numbering in the hundreds (Watson, 2000). School reforms include (as cited in Sternberg, 2000) school-based decision making (Cuban, 1988; David, 1989; Fullan, 1982), school choice (Brandt, 1990/1991), detracking (Goodlad & Oakes, 1988; Oakes, 1985), outcome-based education (Bloom, 1976; Sizer, 1983), performance assessment (Wiggins, 1989a, 1989b; Wolf, LeMahieu, & Eresh, 1992), and total quality management (Bonstingl, 1992; Deming, 1988). Few have been implemented across the country for the past two decades. The results of these studies are often inconsistent, as a given intervention might prove to be effective in some school contexts but not others (Watson, 2000). Even though different schools and organizations have different reform needs, each innovation must take place within the context of the school itself. Thus, an examination of the school context may be in order.

Hence the question of how to bring about school change emerges. What is required of schools to effectively implement and sustain these improvements? Researchers have delved deeply into this area, attempting to identify qualities characteristic of schools that successfully implement particular reforms (e.g., Bulach & Malone, 1994; Johnston, Bickel, & Wallace, 1990; Schweiker-Marra, 1995; Stevens, 1990; Vesiland & Jones, 1998). Factors such as school climate, group (faculty/administration) trust, group (faculty/administration) openness, instructional leadership, parent involvement, and high expectations for student achievement have been cited, among others, as being influential in the transformation of schools (Bulach & Malone, 1994; Peterson, 1997; Stronge & Jones, 1991; Watson, 2000). While research recommends that schools must have these characteristics to be effective and successful in reform, little has been offered as to how schools that lack these attributes can implement an educational innovation effectively.

Sternberg's (2000) theory of contextual modifiability proposes that successful change in a school *requires* that the school be modifiable in the first place, prior to the implementation of an innovation. In determining the modifiability of a school, Sternberg's approach focuses on questions regarding a school's desire for surface-structural and deep-structural change, as well as the self-efficacy of the school culture. Because school reform can be an expensive pursuit, draining the finances and person power of a school, the issue of modifiability is a key factor that should be considered and determined prior to any attempt of reform efforts.

Elements of Successful Reform

Researchers have focused on the instructional practices and contextual attributes of effective schools to generate models to guide schools in need of educational change (Watson, 2000). Instructional attributes shown to characterize effective schools included focus on clearly defined key concepts and standards, effective questioning, and teacher feedback and reinforcement. Contextual attributes such as strong administrative leadership, safe and orderly schools, monitoring of student progress, and parent and community involvement have been shown to play an important role in effective schools (Watson, 2000). As summarized by Walberg and colleagues (1989), effective schools have the following qualities: "strong instructional leadership, a safe and orderly climate, a school wide emphasis on basic skills, high teacher expectations for student achievement, continuous assessment of student progress, and intensive and extensive parent involvement" (p. 804).

School Climate

School climate research has played an integral part in understanding the various factors that contribute to effective schools. With its roots in the earliest research on organizational climate and school effects, the term "school climate" earned a place in the growing body of educational research on reform (Anderson, 1982). However, a specific definition of school climate has yet to be agreed upon by researchers. Kelley (1980) offered that school climate was the "prevailing or normative conditions that are relatively enduring over time and that can be used to distinguish one environment from another" (p. 2). Stronge and Jones (1991) note that while definitions vary from researcher to researcher, they all echo the idea of school climate as being more than just organizational structure, but also involving the unique, subjective "feel" of each school.

Hoy and Tarter (1992) applied a health metaphor of school climate to study the interpersonal relationships in schools. They outlined factors at three levels of the organization (the school board, the administration, and the teacher) that are vital to the health of a school. In a healthy climate, the school board protects schools from unreasonable community and parental pressures, ensuring institutional integrity. The school board is an important point of contact between the school and its environment, functioning much like the semi-permeable membrane of a cell. At the administrative level, structure, consideration, resource support, and high principal influence are key

factors in maintaining strong leadership and harmony within the school. The principal supports the teachers while at the same time setting high performance standards. In addition, the principal utilizes his or her influence with superiors to acquire necessary resources for a school to carry out its mission. At the teacher level, emphasis is placed on high but achievable goals for students, a commitment for effective instruction designed to ensure student learning, and a sense of community and friendliness among faculty. Teachers work cooperatively with the principal to maintain high standards for both their own performance as well as student performance. In addition, Hoy and Tarter acknowledge that in healthy school climates, students are highly motivated, hard working, and respectful of others.

In contrast, unhealthy schools are characterized by low institutional integrity at the school board level; low structure, consideration, and influence on the part of the principal; and low morale and academic emphasis at the teacher level. In this climate, the unreasonable demands of the community interfere with the academic pursuits of the school. In addition, the principal has little or no vision for the school, and provides inadequate direction and support for teachers. Teachers are typically isolated and defensive about their jobs, receive little resource support, and fail to emphasis academic achievement. Consequently, most students do not value hard work or academic achievement and may even criticize those students who do (Hoy & Tarter, 1992).

In a study by Andringa and Fustin (1991), teachers included the following as characteristics of a positive school climate: "high expectations of all students, a strong sense of student identity and belonging, continuous recognition of personal academic excellence, a strong sense of academic mission, and a high level of professional collegiality among the staff" (p. 233). However, some researchers object to using any metaphor of "climate" when discussing schools, claiming that the term is ambiguous and outdated (Maxwell & Thomas, 1991). To these researchers, the educational term "climate" is used in a static sense, whereas the true meaning of "climate" implies that it is dynamic and interactive in nature. Arguing that the term implies administrative control over teachers, Maxwell and Thomas offer an interactive model of culture, which depicts the essential connection between the school culture and the society as a whole. While a precise definition of school climate or culture has yet to be accepted, researchers do tend to agree that school climate is related to the success or failure of a school in successfully adopting an innovation (Stronge & Jones, 1991).

Group Trust and Group Openness

Related to school climate are the issues of group trust and group openness, which have also been cited as being important attributes of effective schools and successful school reform (Bulach & Malone, 1994; Sharma, 2001). Bulach (1993) defines group trust as being "an interpersonal condition that exists between people when interpersonal relationships are characterized by an assured reliance or confident dependence on character, ability, truthfulness, confidentiality, and predictability of others in the group" (p. 384). Group openness refers to the communication of ideas, beliefs, facts, and feelings among persons, and the degree to which the communicating persons listen to one

another. Bulach and Malone (1994) examined 13 schools in Kentucky in an attempt to find a relationship between group trust, group openness, and school climate, and their overall effect on the implementation of reform. Not only did the study indicate a strong positive relationship between levels of group trust and group openness, it also indicated a positive relationship between school climate (which included the variables of group trust and group openness) and the implementation of reform. However, because the participating schools had already implemented the reforms (school-based decision making and non-graded primary grades) one year prior to the study, the authors noted that there was no way to determine whether positive school climate caused successful reform or successful reform resulted in a positive school climate. They suggest that future research examine school climate prior to as well as after the implementation of a school reform effort. The idea that school climate, group openness, and group trust are related to reform success carries an important message to those interested in initiating change in schools.

School Efficacy

Central to Sternberg's contextual theory of modifiability is the notion of school efficacy that has also been linked to school climate. Bandura (1977) studied the concept of personal efficacy and proposed a two-component model, which states that a person's motivation is determined by both outcome expectations and efficacy expectations. He defined outcome expectancy as being "a person's estimate that a given behavior will lead to certain outcomes" (p. 193). Distinguished from this is an efficacy expectation, which is a person's belief that he or she can successfully carry out the behavior necessary for the desired outcome. As he explains,

> Outcome and efficacy expectations are differentiated, because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior. (p. 193)

Bandura suggests that people will avoid situations in which they believe they lack the necessary coping skills, whereas they will participate in activities when they believe confident that they can succeed, even in situations that might appear intimidating. Depending on efficacy expectations, people will either retreat when they are confronted with conflict or difficulty, or they will persevere, taking on the challenge.

Researchers have applied this model to schools, examining the extent to which school efficacy influences school climate. In 1984, Gibson and Dembo studied the efficacy of 208 elementary school teachers using a 30-item Teacher Efficacy Scale. Their results were consistent with Bandura's proposed concept of personal efficacy. In addition, they found that high-efficacy teachers behaved differently from low-efficacy teachers. For example, high-efficacy teachers spent more time guiding students via questioning techniques and making sure that students were completing seatwork than did teachers who were characterized as having low efficacy.

In a similar study, Hoy and Woolfolk (1993) examined the relationship between teacher efficacy (general and personal) and a healthy school climate (specifically, institutional integrity, principal influence, consideration, resource support, morale, and academic emphasis). They administered a version of Gibson and Dembo's Teacher Efficacy Scale and a version of the Organizational Health Inventory to 179 teachers from 37 elementary schools in New Jersey. The results for personal teaching efficacy proved to be different than the results for general teaching efficacy. Only institutional integrity and morale had unique, significant relationships with general teaching efficacy. Personal teaching efficacy was correlated with organizational factors that aided teachers in managing and teaching students. Teachers' sense of efficacy was also related to administrators' responsiveness and the orderly behavior of students. Principal influence and academic emphasis predicted personal teaching efficacy. Teachers experienced high personal efficacy when they "perceived that their colleagues (a) set high but achievable goals, (b) create an orderly and serious environment, and (c) respect academic excellence" (p. 365). Personal efficacy was not related to high teacher morale in this study, but was predicted by educational level (i.e., those with graduate school experience demonstrated higher levels of efficacy). Finally, the authors concluded that their findings suggest that "factors that nurture personal efficacy seem likely to have limited effects on general teaching efficacy and vice versa" (p. 368).

Sternberg's Contextual Theory of Modifiability

Research clearly supports the notion that factors such as school climate, group openness, group trust, and efficacy are important considerations if school reform initiatives are undertaken. However, these factors may not be sufficient. Sternberg (2000) proposes that attempts at school reform often fail because the schools undergoing the transformations lack the necessary modifiability to effectively implement the reforms, not necessarily because the reform plans themselves are inherently flawed. He argues that before weakly contextually modifiable schools can be changed, they first must be made more modifiable.

Referring to Vygotsky's research on individual modifiability and the notion of a Zone of Proximal Development (ZPD) as an index of individual modifiability, Sternberg suggests that a comparable theory of modifiability should exist at the contextual level. Rather than jumping to the assumption that variation across contexts constitutes "error" (e.g., an intervention works in one school but not in another), he believes we should first look at the initial state of the school in terms of its modifiability.

The theory of contextual modifiability centers around two basic kinds of changes: surface-structural change and deep-structural change. While Sternberg notes that this theory could be applied to many levels in the education system (i.e., from central office to classroom), he chooses to focus on the school. In this case, surface-structural change refers to the mere addition of an intervention to the basic foundation of the school as it currently exists. The changes are superficial and reflect a school's desire for the *appearance* of change. In contrast, deep-structural change necessitates the complete

rebuilding of organizational structures in the school. These changes are more profound and deeply impact the overall nature of the education program. Schools that are open to deep-structural change have a desire for genuine change, rather than merely the appearance of change. In addition to a school's openness to change, school efficacy, or the extent to which a school believes it can handle the educational process, influences the degree to which a school is modifiable.

Furthermore, contextual modifiability is not a static school trait that is equal across all situations and in all areas. Rather, it is "an interaction between individuals and collectivities within the organization with the organization as a whole" (Sternberg, 2000, p. 13). Because it is based on individuals as well as organizations, some individuals or departments may be more influenced by changes (and may perceive changes differently) than other individuals or departments. Thus, modifiability cannot be viewed as any *single* property for an entire school. Rather, it should be viewed according to individual and group perceptions.

Sternberg (2000) describes eight different types of schools using a mineralogy metaphor based on the various possible combinations of three main factors: actual change, appearance of change, and self-efficacy. He summarizes the resulting degrees of modifiability for schools based on their desire for actual change, appearance of change, and self-efficacy:

- Rusted Iron: These schools are low in all three areas. There's a sense of hopelessness in these schools, and therefore, the likelihood of either surface-structural and deep-structural change is low.
- Granite: These schools are low in their desire for actual change and the appearance of change, but high in self-efficacy. They don't believe change is needed, and thus, the probability of surface-structural or deep-structural change is low.
- Amber (with internal insects): These schools are low in desire for actual change and self-efficacy, but high in desire for the appearance of change. They feel frustrated by the idea that the school is internally flawed, but don't believe any amount of real reform is possible. Thus, the prognosis for surface change is medium low, and low for deep-structural change.
- Opal: These schools are low in desire for actual change, high in desire for the appearance of change, and high in perceived self-efficacy. They believe that they "look good" and therefore, don't need many changes. The likelihood for structural change in these schools is moderately low, and low for deep-structural change.
- Cubic Zirconium: These schools are low in desire for the appearance of change, low in self-efficacy, yet high in desire for actual change. They tend to ward off visitors (including researchers), lest their flaws be exposed. The prognosis for surface change is moderately low, and for deep-structural change is low.

- Slightly Imperfect Diamond: These schools have a high desire for actual change but a low desire for the appearance of change. They are also high in self-efficacy, and generate a mood of denial. In these cases, the potential for surface-structural change is moderately high, and for deep-structural change is moderately low.
- Lead: These schools exhibit high desire for actual change and the appearance of change, but are low in perceived self-efficacy. They are impatient, hoping for quick fixes and clear results with little or no research. The probability for surface-structural change in these schools is moderately high; for deep-structural change, it's moderately low. If the school can be made to believe in its capability to effect change, the potential for change can be significantly greatened.
- Diamond in the Rough: These schools are high in desire for actual change, appearance of change, and perceived self-efficacy. They are optimistic and confident that change is not only possible in their school, but that change will make their school a better place. They are willing to do what it takes to make their school successful. Obviously, the prognosis for surface-structural and deep-structural change in these schools is high. (pp. 13-19)

Clearly, schools and individuals within a school vary on these three factors (desire for actual change, desire for appearance of change, and perceived self-efficiency). In general, higher levels of these qualities result in greater potential for contextual modifiability. Therefore, Sternberg suggests for those who are trying to implement change in a school, it is advisable that before any steps are taken three questions be asked about a school in order to assess its modifiability (or the extent to which changes can be made):

1. How much desire is there for actual change in the school culture as a whole?
2. How much desire is there for the appearance of change in the culture of the school?
3. What is the self-esteem, or opinion, of the school culture as a whole?

If a school is inherently resistant to modifications, this issue must be addressed prior to the implementation of any innovation.

To empirically assess a school's modifiability, a 116-item Likert scale questionnaire was developed by Sternberg. The purpose of this study was to conduct a reliability and validity study on the instrument. This study was part of a larger study on the effectiveness of specific innovations in assisting teachers in addressing academic diversity. However, only the findings of the study investigating the psychometric properties of the instrument are reported in this research monograph.

School Characteristics Inventory

Sample

Four hundred fifty-two middle level teachers and administrators (n = 452), representing 60 schools across the nation, participated in the initial development study. A random sample of participants was solicited through The National Research Center on the Gifted and Talented (NRC/GT) Collaborative School District database. Ten copies of the survey, a cover letter explaining the purpose of the study, and self-addressed, business reply envelopes were sent to the contact person listed on the database. The contact person was asked to randomly distribute the surveys to middle school teachers and administrators in his/her district. The response rate on returned surveys was 75%.

Instrumentation

Initial SCI. The initial SCI survey contained 116-items that respondents answered on a four-point Likert scale ranging from "not descriptive" to "very descriptive." Respondents were asked how closely descriptive statements applied to their school, the parents and community, the school's administration, the teachers in the school, and the staff (other than administrators and teachers) in the school.

Factor Structure

Because previous work investigating the factor structure of the SCI had not been done, a principal factors extraction with varimax rotation using SPSS for Windows® 10.1.4 FACTOR subroutine on the initial 116-item questionnaire. Prior to principal factor analysis, principal components extraction analyses estimated the number of factors, presence of outliers, absence of multicollinearity, and factorability of the correlation matrices. No cases were identified as outliers and all other indications suggested the assumptions were not violated. In cases where there were missing data, the mean response for that particular variable was substituted.

Six factors (59 items) were extracted and rotated to simple structure. These factors, collectively, accounted for 42% of the variance across the factor solution. Item means, standard deviations, and structure coefficients are presented in Table 1. The six factors were identified and named by referring to those items most clearly defining each factor. A minimum factor saliency criterion of +/- 0.50 (25% of variance) was utilized for this purpose.

Qualitative Descriptions of the SCI Factors

Items associated with each factor are shown in Table 1.

The school reputation factor. Items highly salient with factor 1 as a whole reflected an overall pride about the school and its programs. Items focused on alignment between staff's beliefs about the school emphases and their efforts for students.

Table 1.

Factors, Item Means and Standard Deviations, and Structure Coefficients for the SCI

Factor 1: School Reputation (accounted for 24.0% of variance)	***M (SD)***	**Structure coefficient**
The administration in this school believes that this school is one of the best in the state.	2.94 (1.00)	.73
Teachers in this school think highly of this school.	3.07 (0.86)	.70
Administrators believe this school provides genuinely high-quality education to students.	3.28 (0.69)	.69
Parents and the community believe that the school has a creative educational program.	2.74 (0.84)	.68
Administrators in your school think highly of this school.	3.31 (0.81)	.68
Teachers in this school believe that this school has a creative educational program.	3.03 (0.76)	.66
Teachers in this school believe that this school provides a very solid education.	3.08 (0.83)	.66
Teachers in this school believe the school provides genuinely high-quality education to students.	3.07 (0.82)	.66
The administration in this school believes that this school provides a very solid education.	3.32 (0.75)	.65
Parents and the community believe that the school provides a very solid education.	3.08 (0.71)	.65
Teachers in this school believe it is one of the best in the state.	2.67 (0.94)	.64
The administration in this school accurately recognizes the strengths of this school.	3.10 (0.89)	.63
Parents and the community accurately recognize the strengths of the school.	2.82 (0.74)	.61
Teachers in this school listen to administrators and benefit from their suggestions.	2.82 (0.82)	.61
Teachers in this school believe that this school is "on the way up."	2.83 (0.80)	.61
Parents and the community believe that the school is one of the best in the state.	2.42 (0.93)	.61

Table 1. (continued)

Factors, Item Means and Standard Deviations, and Structure Coefficients for the SCI

Factor 1: School Reputation (accounted for 24.0% of variance)	***M (SD)***	**Structure coefficient**
Parents and the community believe that the school is "on the way up."	2.82 (0.79)	.59
The staff in this school believe that the school works well as a system.	2.83 (0.79)	.59
Teachers in this school accurately recognize the strengths of this school.	3.03 (0.74)	.59
The administration in this school believes that this school has a creative educational program.	3.24 (0.76)	.58
Parents and the community think well of the school, and still are hopeful for improvement of the school.	3.00 (0.74)	.56
Fundamentally this school is sound.	3.19 (0.75)	.55
The administration in this school believes that the school is "on the way up."	3.13 (0.83)	.54
The administration in this school thinks well of this school, and still is hopeful for improvement of this school.	3.35 (0.77)	.54
The mood of the school is positive.	2.85 (0.87)	.54
Teachers in this school feel free to be innovative.	3.08 (0.83)	.51
Teachers in this school think well of this school, and still are hopeful for improvement of this school.	3.08 (0.76)	.51
There is a sense of pride in the school.	3.13 (0.84)	.51
The staff in this school is very devoted to the education of the students.	3.07 (0.86)	.51
Teachers in this school listen to other teachers and benefit from their suggestions.	3.05 (0.77)	.50
Factor 2: General School State – Negative Orientation (accounted for 6.3% of variance)		
There is great emphasis on the "quick fix" to make things better.	1.90 (0.91)	.64
Publicity for the school emphasizes show rather than substance.	3.07 (0.89)	.62

Table 1. (continued)

Factors, Item Means and Standard Deviations, and Structure Coefficients for the SCI

Factor 2: General School State – Negative Orientation (accounted for 6.3% of variance)	***M (SD)***	**Structure coefficient**
Despite dissension, little ever changes in the school.	3.13 (0.90)	.62
The school seems to lack a mission.	3.40 (0.82)	.59
The instructional program of the school has obvious flaws.	3.07 (0.83)	.57
There is a lack of flexibility in the school.	3.09 (0.83)	.56
Parents and the community believe that the school once was OK, but now is not nearly as good.	3.36 (0.78)	.52
Parents and the community are frustrated with the school.	3.32 (0.66)	.51
The mood of the school is one of self-righteousness.	3.36 (0.75)	.51
The school has many resources, but they are under utilized.	2.92 (0.86)	.51
There is an emphasis in the school on doing rather than on reflecting about what is done.	2.21 (0.84)	.51
Factor 3: Staff Attitudes/State of Mind – Negative Orientation (accounted for 3.7% of variance)		
The staff in this school is burned out.	3.07 (0.88)	.62
The staff in this school is reluctant to talk to outsiders.	1.77 (0.86)	.60
The staff in this school is frustrated with the school.	3.12 (0.88)	.60
The attitude of the staff is grim.	3.47 (0.93)	.58
The staff in this school believe that there are obstacles in the system that they just can't get around.	3.00 (0.91)	.51
The staff in this school is pretty much indifferent to the well-being of the students.	3.58 (0.71)	.50

Table 1. (continued)

Factors, Item Means and Standard Deviations, and Structure Coefficients for the SCI

Factor 4: Responsiveness to Change – Negative Orientation (accounted for 3.1% of variance)	***M (SD)***	**Structure coefficient**
The administration in this school is apathetic about this school.	3.67 (0.70)	.61
The administration in this school believes that change would only make this school worse.	1.47 (0.77)	.58
Parents and the community believe that the prognosis for the school is bleak.	3.55 (0.70)	.57
The administration in this school is despondent about the situation in this school.	3.53 (0.78)	.55
Factor 5: General Perceptions of School – Slightly Flawed Orientation (accounted for 2.4% of variance)		
Teachers in this school generally praise this school, except for one major imperfection.	2.39 (0.91)	.73
The staff in this school believes that the school has the potential to be really good if only a major problem with it could be solved.	2.14 (0.91)	.66
The administration in this school praises this school, except for one major imperfection.	1.94 (0.92)	.63
Parents and the community praise the school, except for one major imperfection.	2.23 (0.84)	.58
Factor 6: Administration Responsiveness (accounted for 2.2% of variance)		
The administration in this school listens to teachers and benefits from their suggestions.	2.98 (0.93)	.66
The administration in this school acts on teachers' suggestions.	2.75 (0.87)	.62
The administration in this school accurately recognizes weaknesses of this school.	2.60 (0.90)	.56
The administration in this school is available to talk with.	3.26 (0.88)	.53

The general school state factor. Items most highly salient with factor 2 reflected a negative orientation concerning the school's imperfections. Items focused on providing excuses as to why things (such as lack of mission, resources, no community support) were not in place in the school.

The staff attitudes/state of mind factor. Items most salient with factor 3 also reflected a negative orientation surrounding frustration with the school and the obstacles in the school. Items focused on staff apathy and acceptance of conditions. Items suggested indifference to the well being of students and staff despondence and resignation to sub-par educational programs.

The responsiveness to change factor. Items most highly salient with factor 4 also reflected a negative evaluation of administrators and parents. Items were reflective of apathy and despondence about the school by the school's administration and parent community.

The general perceptions of school factor. Items salient with this factor reflected a slightly flawed orientation about the school's programs with the exception of one major imperfection.

The administration responsiveness factor. Items salient with this factor generally reflected a positive description of the administration in terms of support, responsiveness, resources, and availability.

SCI Item Analysis

Reliability of SCI scales. To assess the reliability of the factors, internal consistency estimates were obtained for each scale as well as the total scale using the SPSS for Windows 10.1.4® RELIABILITY subroutine. Results of the analysis are presented in Table 2. From the table it can be seen that coefficient alpha ranged from a low of .76 (Responsiveness to Change scale) to a high of .94 (School Reputation SCI and Total Scale).

The Standard Error of Measurement (SEM) is an indicator of the degree of confidence that one can place upon the accuracy of a particular individual score. Lord and Novick (1968) demonstrated that the SEM is a function of test length rather than item quality. Due to the relatively small number of items in each scale of the SCI, each SEM is relatively higher than would be expected for an equivalent but larger number of items of equal quality for each scale. SEMs for each scale as well as the total scale are also reported in Table 2. The SEM for the total score in 6.0. This means that there is a 68% chance that one could expect the score of an individual teacher rating a school to vary within a range of six points above or below the teacher's given score if the teacher were to repeatedly rate the school.

Table 2.

Reliability Analyses for the SCI Scales

Scale	k*	*M*	*SD*	Scale Range	α	SEM
School Reputation	30	88.2	16.9	30-120	.94	4.1
General School State	11	27.5	5.6	11-44	.83	2.3
Staff Attitudes/State of Mind	6	19.1	4.5	6-24	.88	1.6
Responsiveness to Change	4	10.0	2.6	4-16	.76	1.3
General Perceptions of School	4	8.4	3.0	4-16	.78	1.4
Administration Responsiveness	4	11.5	3.0	4-16	.84	1.2
Total Scale	59	156.2	24.3	59-236	.94	6.0

*k = # of items

Validity Evidence for the SCI

Cronbach (1970) made the point ". . . we cannot ask the general question 'Is this a valid test?' The question is to ask is 'How valid is this test for the decision I wish to make?' or 'How valid is the interpretation I propose for the test?' " (p. 122). The intent of this study was to collect validity evidence of the SCI based on the degree that scores obtained from it could be interpreted appropriately. Thus the major question was "What kinds of interpretations can one make based on the results of administration of the SCI?"

Criterion predictive validity. As part of the larger NRC/GT project investigating teachers' willingness to implement differentiated instruction or differentiated authentic assessment, evidence of the SCI's validity was collected by assessing these schools' readiness for adapting an innovation and the teachers' actual adoption of an innovation. The following section details the results of qualitative data collected over the 3-year period of the larger study (Brighton, Hertberg, Moon, Tomlinson, & Callahan, under review). The qualitative continuum to describe schools is presented in Table 3. Table 3 is the original description of school types in Sternberg's theory of contextual modifiability.

Table 3.

Eight Types of School in the Theory of Contextual Modifiability

Description	Desire for Actual Change	Desire for Appearance of Change	Self-Efficacy
Rusted Iron	L	L	L
Granite	L	L	H
Amber (with Internal Insects)	L	H	L
Opal	L	H	H
Cubic Zirconium	H	L	L
Slightly Imperfect Diamond	H	L	H
Lead	H	H	L
Diamond in the Rough	H	H	H

L = Low; H = High

Qualitative Descriptions of Schools

Langley Middle School (Assessment): Softened Granite. The majority of teachers and the administration at Langley Middle School exhibited little desire for actual change in their beliefs and attitudes about teaching and learning. The leadership at the school changed twice during the 3-year connection with the school, and both administrators demonstrated little interest in the goals or components of the study. Lou Osborn, the first principal as well as his assistant principal-turned-replacement, Ron Connor, placed little importance on the project as evidenced by words and actions. Connor admitted to "putting the project on the back burner" (Interview, Y3, #2, p. 1) in lieu of other, more pressing issues such as bureaucratic paperwork and walking the halls maintaining order and control. The teachers at Langley were largely independent of administrative influence and each interpreted his/her teaching assignment through the lens of the state tests. An observer to the school described the influence of state testing at Langley. "State tests hung in the air like ecclesiastical incense in a cathedral" (Exit Interview, Y3, #1, p. 6). Test preparation was the primary focus of teachers at Langley.

> Attention to the test permeates everything like ecclesiastical incense in a cathedral. It is in the instruction (pervasive [test-like] writing prompts). It is in the teachers' conversations ("this is the kind of problem you will see on [the state test]"). It is in the décor ([state test] posters displayed in each classroom). (Exit Interview, Y3, #1, p. 6)

Some teachers in the school seemed to value the perception of change, wanting affirmation for their meager efforts. In response to constructive feedback about their individual attempts to create or implement authentic assessments, some teachers became angry and hostile.

> Rhonda's tone vacillated between very defensive and very angry. She seemed frustrated and took a defensive posture (arms crossed in front of her body, moving backwards as [I] spoke to her). I heard Rhonda mention that she had given us tasks that she had done with her students on several occasions and that we had never shown any interest in them. She claimed to have produced an enormous amount of material for us that we had never pursued. (Field notes, Y3, #2, p. 2)

This teacher's dramatic reaction, characteristic of others at Langley, seemed further evidence that the schools' emphasis was more on the appearance of change than on enduring the discomfort associated with actual change. While some individuals seemed focused on gaining attention for their efforts, equal numbers of others resisted change efforts believing that their existing methods were effective enough. The traditional teaching and assessment behaviors were largely executed in whole-group format, focused on hitting as many students as possible, and maintaining classroom control.

Because of these attributes, Langley could be described as a Softened Granite School. It was low in desire for actual change, variable in its desire for the appearance of change, and high in its sense of self-efficacy.

Marshall Middle School (Assessment): Granite. The faculty and school culture at Marshall Middle School communicated little desire to enact deep and substantial change. Melina Wood, the principal, communicated through her words and actions the unimportance of the project objectives. When scheduled to speak at one of the project in-service days she was absent, later citing off-campus meetings as the reason. She did not participate in professional development sessions and was repeatedly unavailable for project-related interviews and informal discussions. The assistant principal, Cleveland Conroy, served as an informal liaison between the faculty and the principal, and he often sat in on professional development sessions to better support and assist teachers. Despite the limited change in their actual behaviors, the teachers at Marshall believed they provided a sufficient instructional program and that the students were well prepared to take state tests. Classroom instruction was largely traditional—teacher directed, whole group, and focused on basic skills. Despite disinterest in changing their practices, teachers believed they served children well, maintaining a strong sense of self-efficacy.

Marshall was a Granite School: low in its desire to enact actual change, low in its desire for the appearance of change, yet strong in its sense of self-efficacy.

Rockford Middle School Metaphor (Assessment): Rusted Iron. Located in a neighborhood notorious for its gangs, drugs, and troubled families, Rockford Middle School served a population of students from mostly economically impoverished

backgrounds. Teachers assigned to teach at Rockford were, by and large, assigned there because of their failures of various sorts in the district's other schools. For the most part, administrators, teachers, and students at Rockford expressed an awareness of the problems inherent in their school. Teachers and administrators seemed acutely aware of the school's low status in the district, attributing this to the fact that the students in the school consistently scored the lowest on standardized testing of any school in the district. As a result, teachers believed that Rockford was the low on the district totem pole, with their needs consistently being met last. Supporting this claim, one teacher cited the fact that the Internet was down at the school for 6 months before someone came to the school to attend to it.

The fact that student test scores were the lowest in the district weighed heavily upon the school, particularly during the years of the study when the state in which Rockford was located transitioned to a high-stakes testing environment. The pressure to raise student test scores was particularly heavy at Rockford, and many teachers expressed feelings of hopelessness and frustration about their students' chances of passing. In general, teachers at Rockford seemed to perceive the majority of the student population as "troubled" or "at-risk." Teachers talked about the struggle of working with this particular population, mentioning the difficulty they faced in trying to teach students who came from troubled home situations, were involved in drugs, or who had turned to prostitution during middle school. Rockford teachers seemed to perceive their jobs as more difficult than those of teachers in other parts of the district, but did not seem to view this distinction as a mark of pride or as a challenge, but rather as an insurmountable obstacle with which they had to contend.

Administrators reacted to Rockford's poor status and poor test scores by clamping down on teachers. The principal of the school held the reigns of power tightly, overseeing all of her teachers' decisions and emphasizing the importance of the high-stakes testing, but the exercise of her power was random and inconsistent. Teachers grumbled about the principal's inconsistencies, and expressed feeling insulted by her obvious distrust of their abilities. The principal maintained an equally inconsistent relationship with the study, offering her assistance and support at one moment, and then telling teachers that they should only pretend to "deal" with the study in the presence of researchers (Field Notes, Y3, #7, p. 1; Observer Exit Interview, Y3, #9, p. 10). She often did not show up at scheduled meetings or did not follow through on promises that she made. Clearly, her major goals for the school were not in line with those of the study.

The attitude that Rockford was a troubled school pervaded the halls and classrooms as well as the teachers' lounge. Student interviews were riddled with comments about the frequency of fighting in the hall, the general "toughness" of the population, and the resulting necessity of "keeping quiet" and "keeping to yourself" to avoid conflict. Students did not appear, however, to be outwardly unhappy at Rockford or even overly negative about the conditions in the school. Rather, they appeared to accept the problems they saw as an inevitable part of their scholastic experience.

The result of these negative attitudes toward the school as a whole was a general sense of apathy. In general, both teachers and students seemed to live by an unspoken code of mediocrity, of keeping excellence under wraps. As noted above, students spoke of the necessity of keeping a low profile, and teachers in general did not seem eager to outshine one another. Members of the Rockford community did not seem to believe that change was impossible in their school; rather, they did not seem to consider changing and did not seem willing to make the sacrifices necessary to do so when presented with the opportunity to change. In fact, the ethos of the school discouraged teachers from rising above the standard of mediocrity that seemed to be almost a pact among them. Observers noted that a particularly apt teacher consciously hid his knowledge of the change initiative when in front of his colleagues and refused to work at a high level with the initiative (even though he repeatedly demonstrated to the observers that he understood the initiative on a deep level) to shield himself from his colleagues' censure. In staff development sessions, he played the "class clown," downplaying his intelligence and teaching skills to fit in with the rest of the teachers. In class, his teaching performance varied from brilliant and lively to complete chaos.

In summary, Rockford Middle School could be categorized as a Rusted Iron School. It appeared to be low in desire for actual change, low in desire for appearance of change, and low in self-efficacy. While the general mood of the school could not be described as despondent, it certainly could be described as resigned to both its self-perceived and actual problems.

Howard Middle School (Differentiation): Semi-precious Opal. Howard's school culture seemed to genuinely value actual change, with administrators, teachers, and the larger school community joining in the dialogue. Eric Waters, the principal of Howard, established a school culture that supported learning. He described his efforts as enacting a learning culture. "We are always learning. We are never satisfied. What else can we do to make ourselves better for kids" (Field notes, Y1, #1, p. 1). While the principal worked hard to establish the culture, he did little to directly support the teachers in changing their instructional practices. In the spirit of professionalism, he allowed teachers a great deal of independence and autonomy to make instructional decisions. The result of the principal's hands-off approach was a mixed reaction from teachers regarding the desire for actual change. Some teachers worked through the ambiguity seeking actual change: re-examining current practices and learning new instructional skills. Other teachers seemed less interested in the hard work and discomfort associated with deep change in the school.

All teachers at Howard seemed interested in the appearance of change in their building and maintained a high degree of self-efficacy. Observers to Howard frequently commented on the welcoming school environment and the receptivity of teachers to the project researchers.

> That is something I notice about the community at Howard. It embraces new people wholeheartedly and continues to nurture the alliance. Sally [a project teacher] is welcoming and excited to share what her students will be doing in

> class (Field notes, Y1, #1, p. 1). Teachers recognized and articulated the importance of Howard's reputation. "I was curious about being here, a top notch place. It's got a good reputation." (Morgan interview, Y2, #5, p. 12)

Howard could be described as a Semi-precious Opal School. It varied in the desire for actual change, yet maintained a powerful image of involvement in the project. The school had a desire for the appearance of change, and maintained consistently high self-efficacy among individual teachers as well as the collective faculty.

Franklin Middle School (Differentiation): Flawed Amber. The teachers and administration at Franklin Middle School exhibited little desire to enact deep and enduring change in their environment. The faculty identified a fatal flaw to their system—state tests—that if eliminated, might increase their ability to enact more substantial change.

> I think that if we had one big thing that caused us difficulties, we would say it was the testing part of things because we have so many other tests and mandates in the district that when we throw other things (like asking for substantial change) on teachers, that just gets unreal. (Principal Interview, Y3, #1, p. 3)

Many teachers in the school rejected even the appearance of change, resisting professional development opportunities, and some withdrew consent to participate in the study.

While the faculty at large seemed to reject measures that promoted change in the school structure, a small pocket of teachers banded together to enact their interpretation of new instructional behaviors. Some of these efforts were shallow and misguided, but the participating Franklin teachers found a route to change in spite of the tests. These efforts, they believed, put them well on the road to change. An observer at Franklin described this subgroup of the faculty as supportive of each other and the study objectives. "This project group has a group identity and the project is valued by the teachers as a real avenue for professional growth" (Field notes, Y3, #2, p. 2). Franklin's principal, Rita Shepard, emphasized the divide between the faculty by awarding additional planning time and material resources to participating teachers, resulting in hostility and cries of inequity from the non-participating faculty members. Her actions signified support of the project objectives, but at the expense of the culture of the school.

Franklin's sub-group of participating teachers highly valued the appearance of change. They enthusiastically discussed differentiated instruction with observers and instructional coaches and were quick to share how much they believed in the new ideas. Classroom activities, however, emphasized show more than substance—efforts that were affirmed by their instructional coach without corrective feedback regarding their misconceptions. In general, Franklin's participating teachers maintained a high sense of self-efficacy, and the non-participating teachers mired in their unconquerable obstacles.

For these reasons, Franklin could be classified as a Flawed Amber School. It was low in its desire for actual change, divided in its pursuit for the appearance of change, as well as in its sense of self-efficacy.

Greene Middle School (Differentiation): Opal. Greene Middle School was a magnet school located in a suburb of a major eastern city. The school itself was large and modern, with stretching halls and a good deal of open space. It was attached to an arts center that provided the school with theatre and dance space, and the library and computer lab were both new and well equipped. The student body of Greene was somewhat diverse. For the most part, students came from middle class, suburban homes, but the population was mixed ethnically and racially. During the time of the study, 10% of the student population received free and/or reduced lunch.

The general atmosphere at Greene was one of friendliness and order. Students were well behaved in the halls and moved without incident from one class to another. Greene emphasized the importance of structure, and both teachers and students seemed to work well within this structure.

Teachers and students shared the belief that Greene Middle School was a good place to be. Both teacher and student interviews were full of references to Greene's excellence. Students were clearly proud of their school. Teachers commented on the high caliber of the student body and expressed feeling "privileged" to work there. However, teachers also noted the large amount of pressure that they felt in teaching at Greene. Administrators regularly observed the teachers, and such observations were weighted heavily, causing newer teachers great anxiety. Additionally, the interdisciplinary curriculum at Greene demanded that teachers teach at least one subject outside of their content areas. Having to learn new content while teaching it caused many teachers to leave Greene after only a few years at the school. While teachers were quick to say that the pressures at Greene were counterbalanced by the considerable resources available to them and the strong students with whom they worked, the large number of teachers who left the school during the time of the study indicated that this may not be the case. (Note: Greene had a 90% teacher attrition rate in the larger project.)

Despite the pressures of teaching at Greene, teachers agreed that Greene was an excellent school. Most believed that their interdisciplinary focus made them a truly innovative school. Most seemed quite protective of their school, frequently mentioning that the school's test scores were the highest in the district by far. One teacher did indicate that he was concerned that Greene's reputation for innovation was being threatened by a new attitude of entrenchment. He expressed anxiety that Greene was "resting on its laurels" and resistant to change.

Surprisingly, at a school where resources were abundant and the student population was largely gifted and talented, school members, including the faculty and the second principal, were not, as the above teacher indicated, supportive of change. Initially, the school, including the first principal, appeared supportive of the study, but in reality, nearly everyone in the school eventually abandoned it. With the appointment of

the new principal in Year 2, teachers began to avoid staff development sessions and the coach, claiming overload. The new principal, while verbally expressing support for the initiative, did little to facilitate the coach's work at the school.

Greene Middle School could be classified as an Opal School. Based on the school members' resistance to the change initiative, it was clear that the school was low in desire for actual change. However, the school culture was partially based on the belief that it was an "innovative school," therefore, it seemed of great importance that the school be perceived as willing to change and as capable of change. Additionally, the school was very high in perceived self-efficacy; clearly, nearly all members of the Greene community believe strongly that their school was one of the finest in the district.

Haden Middle School (Comparison): Rusted Iron. Haden Middle School was characterized as a Rusted Iron School. It was low in its desire for actual or even the appearance of change, and maintained a consistently low sense of self-efficacy. Haden served as a comparison school, and as such, did not actively participate in professional development or coaching until after the data collection period was completed. Between the second and third years of the study, a new principal was appointed at the school, the fifth new administrator in 7 years.

> The new principal's inaccessibility was reminiscent of Haden's earlier administration. Her attitude was condescending. The faculty was beaten up and bitter. Lydia Esmont, the new principal, came in fighting. It was tactic the school did not need. . . . The faculty is a regiment seasoned with years of infighting. (Field notes, Y3, #1, p. 1)

From the beginning of the study, the faculty and administration of Haden seemed hostile toward new ideas. An observer commented on the adversarial relationship between the teachers and the new principal:

> In a site-based management meeting, the principal told the teachers their lesson plans were "crap." In a faculty meeting, Esmont's response to a teacher's concern about the continual negative feedback from the principal was, "If you would listen to me I would help you." She also told the faculty that if they did not like what she was doing she would get rid of them. She told one teacher that he was an embarrassment to her as an administrator. Esmont asked another teacher if she had ever written a lesson plan. Such comments can only be interpreted as direct threats to teachers. (Field notes, Y3, #1, p. 3)

Although Haden was eligible to receive professional development services following all data collection, it expressed little interest in the opportunity. When pressed, Esmont agreed to an after-school session for teachers on the topic of differentiated instruction. Prior to the beginning of the in-service, she summoned teachers to the session through a public address system in the school. "You have exactly five minutes to get into the library for the differentiated instruction workshop. I will be taking

attendance at the meeting. Those teachers not present will be written up" (Field notes, Y3, #5, p. 1). Teachers grudgingly arrived and passively listened to the presenter.

Haden was a Rusted Iron School. It was low in its desire for actual change, low in its desire for the appearance of change, and consistently low in self-efficacy.

Parkway Middle School (Comparison): Lead or Rusted Iron. The school's atmosphere was one of unrest and turbulence. The school's halls echoed with the shouts of teachers from inside classrooms and the retorts of angry students. In general, the relationship between students and teachers seemed to be a battle of wills. Teachers commented on the confrontational attitude of students toward authority figures. Student-to-student interaction in the halls, too, appeared characterized by exchanges of insults. One of the school's administrators noted that, between classes, the halls were filled with turmoil, a turmoil she noted as a contributing factor to Parkway's discipline problems.

Teachers also felt that Parkway was an example of a "problematic school," citing problems with attendance and problems with discipline as the school's two biggest issues. They perceived student achievement as medium-to-low, noting that their student population was mostly on grade level, with many below grade-level and only a few above. Teachers felt that Parkway needed to focus more on improving student achievement by improving the school on the instructional level. However, most felt that the school first had to address the discipline issues prevalent in the school before that could be accomplished.

One of the school's administrators believed that Parkway Middle School was not a high priority in the district, and cited the school's general lack of resources as an example of the inequities in education based on economic lines. She identified the majority of the student population at Parkway as "at-risk," and expressed great consternation at the dearth of resources available to them at the school. She felt that the school's largely at-risk population was a deterrent to good teachers, and noted that, as a result, her faculty was largely inexperienced and poorly prepared for dealing with students with needs such as those at Parkway. Generally, the administrator seemed very frustrated—and unhopeful of change—by the conditions at Parkway. She did, however, appear deeply committed to the students and was the only administrator who made efforts to accommodate the study. The assistant principal was less willing to meet and discuss the school with observers. Despite their often-busy schedules, Parkway teachers were quite cooperative in terms of meeting with observers.

In general, teachers were not considered part of the decision-making process at Parkway. Instead, the first principal, who was present during the first year of the study, and the assistant principal made policy decisions without teacher input and expected teachers to follow. Additionally, this principal and assistant principal took away team planning time and assigned faculty additional duties. These types of top-down decisions angered and frustrated teachers and, as a result, the principal was not well liked by the faculty. When news spread that she had resigned as principal, the faculty seemed to breathe a sigh of relief.

While the faculty believe that the school climate was much improved under the new principal, he was less cooperative with the study than the previous principal. He did allow teachers more input in the decision-making process. Teachers, however, perceived the atmosphere at Parkway much more orderly under his watch. Teachers attributed this change in atmosphere to the new, stricter discipline policies that the principal initiated. As a whole, the school community seemed to believe that it had undergone significant change because of the departure of the old principal and the installation of the new. Teachers cited the fact that they wanted to remain at Parkway as evidence of the shift in the school's atmosphere. There was a lingering sense that the school was riddled with so many problems that even these significant changes (as perceived by teachers) did not make Parkway a "good" school, but the atmosphere in the second and third years of the study was more positive than in the first year.

Parkway Middle School was a school that was high in desire for actual change and high in desire for appearance of change. All stakeholders were eager to make adjustments to the school that would result in a more comfortable school environment and better instructional practices. However, Parkway appeared to be low in perceived self-efficacy, as nearly all school members mentioned the numerous problems plaguing the school. Parkway Middle School, in some respects, appeared to be a Lead School. The changes that occurred at Parkway were not gradual changes evolving out of careful planning. Rather, the changes came quickly, as a result of the change in principals. Additionally, the nature of the changes at Parkway was surface-level, not deep-structure changes. While the climate of the school did alter significantly with the principal switch, no major changes occurred on the instructional level, although they were needed desperately. In other ways, however, Parkway appeared to be more like a Rusted Iron School. Teachers and administrators did not seem to think that a "quick fix" was what their school needed; rather, they recognized the deep structural changes that were needed. But school staff seemed uncertain that they could actually be accomplished. While school personnel did not seem to feel that the prognosis for the school was hopeless, they were realistic about the level of changes—and the amount of time it would take to make the changes that the school required before it was functioning as a "good" school.

Cleveland Middle School (Comparison): Diamond in the Rough. Cleveland Middle School was a rather typical neighborhood school in the southwest. The school served students from diverse socioeconomic backgrounds and of varied academic readiness levels. All students were served in heterogeneous classrooms. Although the school employed a security officer, the school's halls were orderly and calm, and neither violence nor disruption were a usual occurrence at Cleveland.

Cleveland teachers seemed content with their jobs and their school, and, like their principals (there were two different principals over the course of the study), seemed to have a positive view of both the school and the students. The first principal appeared supportive of change and open to innovative ideas. However, she was not an instructional leader and gave her faculty a wide berth in making instructional decisions. The second principal was more involved in teachers' classrooms, conducting regular observations and discussing possibilities for improvements in teacher practice. The

second principal appeared knowledgeable about the innovations she suggested. She was eager for her faculty to receive the "treatment," continually seeking opportunities to learn more about the innovation and making plans for staff development at the conclusion of the study. She seemed confident that her faculty had great potential for mastering the innovation.

The second principal held continual teacher learning in high esteem. During the course of the study, the school was involved in ongoing staff development in applied learning, an innovation about which teachers frequently talked. While she certainly had a high opinion of the potential of her faculty, the principal was also very realistic about how far they had to go.

Teachers at the school also seemed willing to change, although, as in most schools, some were more eager than others. In general, the school's veteran teachers appeared to be more resistant to innovation than the less experienced teachers.

Cleveland appeared to be a Diamond in the Rough school. The culture of Cleveland was one eager to implement real change, desirous of the appearance of change, and possessing high self-efficacy. The mood at the school was positive and energetic; both teachers and administrators were open to changing their practices. The principal seemed confident that continual change and progress were the keys to the school's success.

Quantitative Data Collected on SCI Scales

In addition to the qualitative data collected in the schools, teachers in each school completed both the SCI and the Trouble Shooting Checklist (TSC, Manning, 1976) instruments to assess evidence of criterion concurrent validity of the SCI. This evidence is presented by correlational data between the SCI and the TSC, another paper-and-pencil instrument designed to measure an organization's potential for successfully adopting and implementing educational innovations. Table 4 provides a description of the TSC scales and Table 5 provides means, standard deviations, and coefficient alphas for each TSC scale based on the norming sample.

Trouble Shooting Checklist (TSC)

The TSC (Manning, 1976) is an instrument designed to measure an organization's potential for successfully adopting and implementing educational innovations. The instrument is comprised of seven scales that focus on a school's communication patterns, innovative experience, school-based staff, central administration, school/community relations, organizational climate, and students. The seven scales of the TSC provide a diagnostic profile that focuses on the readiness of an organization for the adoption and implementation of an innovation. The profile provides areas of strengths and weaknesses in relation to the school's environment, so as to provide an estimate of the effects of particular variables on the adoption process of an innovation.

Table 4.

Trouble Shooting Checklist (TSC) Scale Definitions

Scale	Scale Definition
School-Based Staff	Focused on personality and leadership styles of principals, teachers, and counselors.
Communication	Focused on communication activities throughout the entire school system.
Innovative Experience	Focused on a school's experience with innovations and attitudes towards innovations.
Central Administration	Focused on relations between the central offices, school, and school board.
Community Relations	Focused on variables such as amount and sources of funding, the degree of interest and involvement of community groups in the school system, and attitudes of the community towards the school.
Organizational Climate	Focused on the work climate and organizational structure of both the school and the district.
Students	Focused on student behavior, attitudes, and demographic characteristics.

Table 5.

Coefficient Alpha Estimates for the TSC

Scale	k*	*M*	*SD*	*Mdn*	α	SEM**	Scale Range
School-based Staff	13	50.08	8.62	50.00	.79	4.0	13-65
Communications	15	53.45	12.24	52.00	.89	4.1	15-75
Innovative Experience	16	63.02	12.96	63.00	.92	3.7	16-80
Central Administration	14	57.45	10.16	55.00	.84	4.1	14-70
School/Community Relations	13	50.86	8.66	50.00	.82	3.7	13-65
Organizational Climate	15	59.67	10.86	58.00	.87	3.9	15-75
Students	14	51.22	10.07	50.00	.89	3.3	14-70
Total	100	385.78	65.10	377.00	.95	14.56	100-500

* k = # of items
** SEM = standard error of measurement

Pearson product-moment correlations between scales on the TSC and the SCI are displayed in Table 6. Of the 56 correlations displayed in Table 6, 37 were significant at the .05 level, suggesting that there is was a relationship between the teachers' responses on the SCI and their responses on the TSC. The largest correlations were between the TSC Students scale and each of the SCI's scales as well as the total TSC scale and each of the SCI scales. The School Reputation scale of the SCI correlated significantly with every scale of the TSC. Tables 7 and 8 provide means and standard deviations for the SCI and the TSC based upon the study's sample.

Table 6.

Correlations Between the SCI and the TSC Scales (n = 160)

School Characteristics Inventory	Trouble Shooting Checklist							
	I	II	III	IV	V	VI	VII	Total
I	0.336*	0.360*	0.267*	0.228*	0.315*	0.256*	0.595*	0.571*
II	0.166	0.172*	0.140	0.114	0.010	0.138	0.363*	0.326*
III	0.121	0.182*	0.102	0.115	0.111	0.078	0.422*	0.374*
IV	0.209*	0.232*	0.252*	0.220*	0.237*	0.187	0.358*	0.301*
V	0.009	-0.033	-0.057	-0.009	-0.056	-0.015	-0.208*	-0.232*
VI	0.240*	0.422*	0.119	0.168*	0.227*	0.131	0.408*	0.499*
Total	0.325*	0.329*	0.236*	0.245*	0.312*	0.252*	0.548*	0.507*

Note: SCI – (I) School Reputation; (II) General School State; (III) Staff Attitudes/State of Mind; (IV) Responsiveness of Change; (V) General Perceptions of School; (VI) Administration Responsiveness
TSC – (I) School-based Staff; (II) Communications; (III) Innovative Experience; (IV) Central Administration; (V) School/Community Relations; (VI) Organizational Climate; (VII) Students

*$p < .05$

Table 7.

School Characteristics Inventory Means and Standard Deviations by Schools

School	School Reputation k*=30	General School State k=11	Staff Attitudes/State of Mind k=6	Responsiveness to Change k=4	General Perceptions of School k=4	Administration Responsiveness k=4	SCI Total k=59
State 1– Rockford	79.92 (13.55)	36.27 (0.73)	20.57 (4.95)	13.38 (3.51)	7.50 (3.32)	12.18 (2.93)	156.92 (43.77)
State 1– Haden	80.98 (6.53)	35.83 (0.97)	19.18 (3.73)	14.53 (1.73)	10.38 (2.13)	8.50 (2.94)	169.40 (10.31)
State 1– Howard	92.67 (7.36)	36.57 (0.45)	24.64 (1.99)	15.66 (2.17)	6.93 (2.63)	12.89 (1.80)	189.35 (10.22)
State 1– Marshall	85.15 (9.80)	35.88 (1.28)	23.41 (3.51)	14.42 (2.91)	8.14 (3.28)	12.29 (1.87)	177.57 (20.57)
State 2– Langley	82.67 (7.58)	35.95 (0.89)	24.36 (1.99)	14.71 (2.31)	9.00 (2.26)	11.71 (2.52)	176.28 (13.39)
State 2– Cleveland	85.19 (12.44)	36.08 (1.02)	24.07 (3.17)	15.72 (1.33)	8.48 (3.27)	11.70 (2.45)	178.22 (28.21)
State 2– Franklin	87.15 (8.40)	35.58 (0.85)	23.00 (3.43)	15.27 (1.19)	8.40 (2.90)	12.36 (2.66)	180.34 (14.90)
State 3– Parkway	74.87 (7.66)	35.23 (0.55)	18.92 (5.26)	13.87 (1.82)	9.00 (1.41)	9.60 (1.95)	161.49 (12.10)
State 3– Greene	97.55 (4.17)	36.83 (1.05)	23.41 (3.51)	14.42 (2.91)	8.14 (3.28)	12.29 (1.87)	192.81 (11.21)

Scale Ranges: School Reputation = 30-120; General School State = 11-44; Staff Attitudes/State of Mind = 6-24; Responsiveness to Change = 4-16; General Perceptions of School = 4-16; Administrative Responsiveness = 4-16; Total scale = 59-236

*k = # of items in scale

Table 8.

Trouble Shooting Checklist Means and Standard Deviations by Schools

School	School-based Staff k*=13	Communications k=15	Innovation Experience k=16	Central Administration k=14	School/ Community Relations k=13	Organizational Climate k=15	Students k=14	TSC Total k=100
State 1– Rockford	33.08 (12.27)	36.92 (14.66)	30.17 (17.13)	20.75 (13.48)	34.08 (15.35)	30.00 (12.94)	39.25 (15.11)	325.54 (107.61)
State 1– Haden	38.94 (8.98)	37.94 (12.75)	41.81 (10.66)	25.94 (10.43)	35.50 (13.04)	41.00 (8.11)	37.00 (7.94)	321.90 (43.51)
State 1– Howard	41.93 (8.31)	44.07 (11.84)	44.22 (14.39)	30.93 (17.80)	41.78 (13.73)	38.89 (11.50)	51.33 (8.43)	369.25 (34.21)
State 1– Marshall	44.43 (9.99)	41.67 (9.71)	38.29 (11.41)	25.86 (10.68)	36.52 (8.80)	36.38 (9.27)	45.48 (9.33)	359.90 (39.67)
State 2– Langley	36.61 (10.92)	42.28 (13.14)	37.17 (14.00)	32.33 (13.16)	37.67 (10.18)	39.00 (10.50)	42.22 (8.50)	345.03 (34.02)
State 2– Cleveland	37.43 (12.03)	43.48 (12.34)	31.81 (14.38)	28.05 (12.52)	38.48 (12.63)	35.90 (11.60)	40.14 (15.10)	347.99 (50.82)
State 2– Franklin	39.58 (8.51)	42.25 (8.41)	40.17 (13.11)	28.25 (15.05)	41.38 (11.06)	38.29 (9.20)	41.33 (6.68)	338.39 (32.78)
State 3– Parkway	40.60 (8.08)	36.20 (7.33)	45.80 (7.01)	27.40 (4.04)	39.60 (12.66)	35.60 (7.64)	34.00 (6.16)	322.29 (27.14)
State 3– Greene	48.71 (5.72)	46.76 (7.87)	48.94 (14.63)	31.35 (15.27)	41.35 (8.02)	44.41 (9.64)	61.76 (4.01)	402.31 (15.49)

Scale Ranges: School-Based Staff = 13-65; Communications = 15-75; Innovation Experience = 16-80; Central Administration = 14-70; School/Community Relations = 13-65; Organizational Climate = 15-75; Students = 14-70; Total Scale = 100-500

*k = # of items in scale

Comparison of SCI Qualitative Descriptions and SCI Quantitative Results

As part of the validity study of the SCI, comparison of the qualitative and quantitative data was conducted. While, the original SCI survey was modified based on the factor analysis results, we were interested in the degree to which total scores on the SCI ranked ordered schools on the continuum of Rusted Iron (low capacity for modifiability) to Diamond in the Rough (high capacity for modifiability) as originally presented by Sternberg (2000). Table 9 displays each school's descriptions based on qualitative data and the responses to the SCI survey.

Based on total SCI scores and the qualitative descriptions, in general, the classification of the type of schools aligned with the rank ordering of the SCI scores. That is, schools with the lowest mean SCI value were also the schools that were classified as Rusted Iron schools. The only exception to this was the classification of Cleveland. Based on Cleveland's SCI scores, they would have been classified as a Granite School. However, based on qualitative data, a Diamond in the Rough classification was assigned.

Table 9.

Project Schools Contextual Modifiability Classifications

Description	Desire for Actual Change	Desire for Appearance of Change	Self-Efficacy
State 1–Rockford (Rusted Iron)	L	L	L
State 1–Haden (Rusted Iron)	L	L	L
State 1–Howard (Semi-Precious Opal)	V	H	H
State 1–Marshall (Granite)	L	L	H
State 2–Langley (Softened Granite)	L	V	H
State 2–Cleveland (Diamond in the Rough)	H	H	H
State 2–Franklin (Flawed Amber)	L	V	V
State 3–Parkway (Lead or Rusted Iron)	V	V	V
State 3–Greene (Opal)	L	H	H

L = Low; H = High; V = Variable

Discussion

The present data analyses give credence to the reliability and validity of the SCI and tentatively support the organizational modifiability construct theorized by Sternberg (2000). Obviously, these results are only tentative and are in need of replication in other school settings considering adopting an educational innovation. The SCI seems promising as an instrument for measuring the modifiability of a school in regards to adopting and sustaining an educational innovation. Such an assessment could key district or school administrations into particular areas of a school culture that are fragmented or that need to be emphasized prior to undergoing school reform. This information could serve as valuable initial input prior to undertaking school reform initiatives. However, it is advisable to continue to gather data to gauge these same indicators overtime as interactions between individuals and their context likely affects continued capacity and willingness to adopt and sustain an educational innovation.

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Appendix A
School Characteristics Inventory Survey

School Characteristics Inventory Survey*

The National Research Center on the Gifted and Talented
University of Virginia

The following statements ask you to make specific evaluations about different aspects of your school. For each statement, please indicate the degree to which the statement accurately describes your school by circling the number that corresponds to your answer. Possible answer categories are:

NOT DESCRIPTIVE = *1*
MINIMALLY DESCRIPTIVE = *2*
GENERALLY DESCRIPTIVE = *3*
VERY DESCRIPTIVE = *4*

How descriptive of your school is each of the following statements?

	NOT DESCRIP	MIN DESCRIP	GEN DESCRIP	VERY DESCRIP
The school has many resources, but they are underutilized.	1	2	3	4
There is a sense of pride in the school.	1	2	3	4
The school seems to lack mission.	1	2	3	4
There is a lack of flexibility in the school.	1	2	3	4
There is great emphasis on the "quick fix" to make things better.	1	2	3	4
Publicity for the school emphasizes show rather than substance.	1	2	3	4
The instructional program of the school has obvious flaws.	1	2	3	4
There is an emphasis in the school on doing rather than on reflecting about what is done.	1	2	3	4
Despite dissension, little ever changes in the school.	1	2	3	4

* Adapted from Sternberg, R. (n.d.). Reforming school reform. (Unpublished manuscript).

	NOT DESCRIP	MIN DESCRIP	GEN DESCRIP	VERY DESCRIP
The mood of the school is positive.	1	2	3	4
The mood of the school is one of self-righteousness.	1	2	3	4
Fundamentally this school is sound.	1	2	3	4
Parents and the community:				
. . . are frustrated with the school	1	2	3	4
. . . believe that the school is one of the best in the state.	1	2	3	4
. . . believe that the school has a creative educational program.	1	2	3	4
. . . believe that the school once was OK, but now is not nearly as good.	1	2	3	4
. . . believe that the prognosis for the school is bleak.	1	2	3	4
. . . believe that the school provides a very solid education.	1	2	3	4
. . . accurately recognize the strengths of the school.	1	2	3	4
. . . think well of the school, and still are hopeful for improvement of the school.	1	2	3	4
. . . believe that the school is "on the way up."	1	2	3	4
. . . generally praise the school, except for one major imperfection.	1	2	3	4
The administration in this school:				
. . . believes that this school is "on the way up."	1	2	3	4
. . . accurately recognizes weaknesses of this school.	1	2	3	4
. . . believes that this school has a creative educational program.	1	2	3	4

	NOT DESCRIP	MIN DESCRIP	GEN DESCRIP	VERY DESCRIP
. . . believes that this school is one of the best in the state.	1	2	3	4
. . . believes that change would only make this school worse.	1	2	3	4
. . . believes that this school provides a very solid education.	1	2	3	4
. . . is despondent about the situation in this school.	1	2	3	4
. . . is available to talk with.	1	2	3	4
. . . listens to teachers and benefits from their suggestions.	1	2	3	4
. . . thinks well of this school, and still is hopeful for improvement of this school.	1	2	3	4
. . . praises this school, except for one major imperfection.	1	2	3	4
. . . is apathetic about this school.	1	2	3	4
. . . accurately recognizes the strengths of this school.	1	2	3	4
. . . acts on the teachers' suggestions.	1	2	3	4
Administrators in your school think highly of this school.	1	2	3	4
Administrator salaries are high in this school.	1	2	3	4
Administrators believe this school provides genuinely high-quality education to students.	1	2	3	4
Teachers in this school:				
. . . believe that this school is one of the best in the state.	1	2	3	4
. . . feel free to be innovative.	1	2	3	4
. . . listen to other teachers and benefit from their suggestions.	1	2	3	4
. . . believe that this school provides a very solid education.	1	2	3	4

	NOT DESCRIP	MIN DESCRIP	GEN DESCRIP	VERY DESCRIP
. . believe your school provides genuinely high-quality education to students.	1	2	3	4
. . . accurately recognize the strengths of this school.	1	2	3	4
. . . think well of this school, and still are hopeful for improvement of this school.	1	2	3	4
. . . generally praise this school, except for one major imperfection.	1	2	3	4
. . . believe that this school is "on the way up."	1	2	3	4
. . . believe that this school has a creative educational program.	1	2	3	4
. . . listen to administrators and benefit from their suggestions.	1	2	3	4
. . . think highly of this school.	1	2	3	4
The staff in this school:				
. . . are pretty much indifferent to the well-being of the students.	1	2	3	4
. . . believe that there are obstacles in the system that they just can't get around.	1	2	3	4
. . . are frustrated with the school.	1	2	3	4
. . . believe that the school has the potential to be really good if only a major problem with it could be solved.	1	2	3	4
. . . believe that the school works well as a system.	1	2	3	4
. . . are burned out.	1	2	3	4
. . . at the school are reluctant to talk to outsiders.	1	2	3	4
. . . are very devoted to the education of the students.	1	2	3	4
The attitude of the staff is grim.	1	2	3	4

Research Monograph

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