BEYOND STANDARDIZED TEST SCORES: AN EXAMINATION OF LEADERSHIP AND CLIMATE AS LEADING INDICATORS OF FUTURE SUCCESS IN THE TRANSFORMATION OF TURNAROUND SCHOOLS

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ABSTRACT

Districts throughout the nation are engaged in comprehensive transformation to "turn around" low performing schools. Standardized test scores are used to gauge student achievement; however, academic gains may lag behind leading indicators such as improved school climate and effective leadership. This study examines 16 underperforming schools to discover what factors may be considered leading indicators. Turnaround and traditional schools were compared on three factors: leadership, climate and achievement. Assessment tools included the Multifactor Leadership Questionnaire (MLQ) (Avolio & Bass, 2004), standardized assessments, and participant ratings of overall school climate on an A to F grading scale. Findings show that turnaround teachers rated their leader significantly higher on all MLQ subscales and assigned significantly higher climate "grades," to their schools than traditional school teachers but demonstrated no significant academic gains. The authors assert that leading indicators may be indicative of the future growth of lagging indicators such as test scores, and should be considered benchmarks in the transformation process.

Keywords: Turnaround schools, Transformative leadership, Urban school reform, School Climate

Historian Diane Ravitch (2013) refers to educational reform in America as "corporate reform because reformers want to use crude metrics to judge teachers and schools. They think data are better measures of quality than professional judgment. On the basis of standardized test scores they are happy to label schools as failing if their scores are low" (2013, para. 4). While Ravitch's observations may appear somewhat pessimistic, U.S. schools and policymakers continue the struggle to establish practical research based strategies to improve and measure

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student gains in low performing schools. Under the current version of No Child Left Behind (NCLB), the Department of Education predicts that failing schools could jump from 37% to 82% with estimates that four out of five public schools could be labeled as failing (Associated Press, 2011) with the majority attributed to struggling urban schools.

This investigation probes what variables indicate that a school may be on course for a positive transformation process. Kowal and Ableidinger (2011) refer to leading indicators as those "early signs used regularly to determine whether an organization is on the right track" (p.1). In a 2010 Department of Education briefing Secretary of Education Arne Duncan expressed that "leading indicators like attendance and school climate should be considered in rating schools…..sometimes test scores are lagging indicators" (Toppo, 2010, para. 12). Leading indicators or variables examined in this study include principal leadership effectiveness, standardized assessment scores in grades 3 – 8 in reading and math, and perceptions of overall school climate on an A to F grading scale. Analyses were conducted on eight elementary schools identified as turnaround schools, and eight elementary schools identified as traditional schools. The purpose of the study was to discover if differences existed between the traditional and turnaround schools after two years of turnaround strategy implementation. Strategies include additional curricular, administrative, and data analysis support, professional development, and resources for parent support groups In addition to assessing achievement and perceived climate, the study utilizes the Multifactor Leadership Questionnaire (Avolio & Bass, 2004) to evaluate principal leadership behavior.

Turnaround Schools

According to the National Governors Association, there are three million students in America who attend five thousand failing schools (NGA Center for Best Practices, 2011)). In the midst of such significant school failure, leaders are calling for dramatic intervention to keep the US competitive in the global marketplace (Bracy, 2008; Wallace, Deem, O'Reilly, & Tomlinson, 2011). No Child Left Behind defines school turnaround as "dramatic and comprehensive intervention in low performing schools that produce significant gains in student achievement within two academic years; and readies the school for the longer process of transformation into a high-performance organization (Kutash, Nico, Gorin, Rahmatullah & Tallant, 2010, p. 4). "Turnaround Schools" have become increasingly popular over the last decade with nearly 18% of the nation's schools identified as "in need of improvement" (Mathis 2009, p. 2).

Since 2009, an estimated $8.5 billion dollars in federal funds have been allotted for initiatives to address school improvement, representing a significant investment by the federal government to entice school districts to embark on creative and innovative models to turnaround failing schools. Secretary Duncan asserts that school improvement models "require schools to institute far-reaching changes to improve student learning." (U.S. Department of Education, March 19, 2012, para. 15). Kutash, et.al. (2010) and McMurrer (2012) describe the four

models of School Improvement Grants outlined under NCLB for struggling schools:

1. Closing the school and enrolling students in higher achieving schools (school closure).
2. Converting to a charter school (restart).
3. Replacing the principal for increased teacher and leader effectiveness, rehiring less than 50% of the staff, and implementing strategies to increase learning time (turnaround).
4. Replacing the principal for increased teacher and leader effectiveness, instituting comprehensive instructional reforms, increasing learning time and community connections, and providing operational flexibility and sustained support (transformation).

While there are pockets of reported success in many states, the turnaround concept has its detractors. Smarick (2010), a former distinguished visiting fellow at the Thomas Fordham Institute, laments in the *Turnaround Fallacy* that "overall turnaround efforts have consistently fallen short of hopes and expectations" (p. 21). The turnaround approach, while robust and innovative, remains contrary to many researchers' findings in the area of change and organizational effectiveness; they view change as a methodical, incrementally gradual process (see Collins, 2001; Kotter, 1996; Quinn & Snyder 1999; Senge, 1990; Walters, Marzano & McNulty, 2003).

Perhaps the most significant research conducted on turnaround schools was completed by the Mass Insight Education and Research Institute (2007) who identifies six critical zones for successful turnaround efforts. Their critical zones include 1. Recognition of the challenge. 2. Dramatic, foundational reform. 3. Urgency. 4. Supportive operating conditions. 5. New-model, high capacity partners. 6. New state and district structures. Mass Insight (2007) notes that 'turnaround' is a different and far more difficult undertaking than school improvement. It should be viewed as a distinct professional discipline that requires specialized experience, training and support. Secondly, turnarounds require transformation. Schools that serve high poverty students, require creatively rigorous environments to meet the needs of diverse students. Third, turnaround schools produce significant achievement gains within two years, while readying the school for subsequent maturation into a high performance organization. Fourth, turnaround leaders must be empowered to make decisions regarding all school aspects, based on mission, strategy and data. Fifth, the work in turnaround schools demands skillful change management at the ground level. And lastly, turnaround requires innovation from policymakers at all levels.

Most states have established criteria to measure success, typically relying on achievement scores, but determining causality for success in turnaround schools is nebulous at best, given the myriad of variables such as student population, leader and teacher quality, levels of funding, and union support. In the *School Turnaround Field Guide*, Kutash, et.al. (2010) identify four areas to consider when establishing measures of school improvement including school

climate, school connectivity, teacher and school leader engagement and effectiveness, and measures of student progress and outcomes. This present study focuses on three of Kutash's et.al. measures and seeks to find if school leader effectiveness, measures of student progress, and perceived school climate may serve as leading indicators for turnaround school improvement.

The Role of Climate in Student Achievement

The impact of climate on school effectiveness has been a focus of study, research, and debate for decades. Cohen, McCabe, Michelli and Pickeral (2009) site an increasing body of literature that indicate positive school climate is "associated with and predictive of academic achievement" (p. 181). School climate is a "relatively enduring quality of the school environment that is experienced by teachers, student and staff, affects their behavior, and is based on their collective perceptions of behavior in schools" (Hoy & Miskel, 2005, p. 185). Many researchers suggest that variables associated with school climate, such as social support, caring classroom, teacher commitment, and student teacher relations are not only desirable, but, prerequisites for positive behavioral change (Flay, 2000; Zullig, Huebner & Patton, 2010).

The authors surmise that policies such as No Child Left Behind are driven by accountability measures drawing distinctly linear connections between assessment scores and school improvement and a growing body of research suggests the inclusion of school climate as a measureable variable. McMurrer (2012) describes an in-depth report on schools in their first 18 months of School Improvement Grant implementation across three states. The common denominator in her findings reflects improvements in school climate as a leading indicator that the schools were "moving in the right direction" (p. 5). The study reports principals seized the early momentum of their improved school climate as the impetus for instructional reform. In lieu of compelling research reflecting the pivotal nature of positive school climate for teachers and students, policymakers have been remiss in incorporating this research into policies, practices, and evaluative structures in the school improvement process (Cohen et al., 2009, p. 182). Kowal and Hassel (2005) assert that the ability of a strong leader is the most pivotal factor in the success or failure of a turnaround effort.

Effective Leadership for Turnaround Schools

The role of the school leader continues to be a key ingredient in creating effective schools. Halawah (2005) notes the "effect of the principal on student learning cannot be overemphasized" (p. 334). Researchers assert the principal maintains a significant effect on the effectiveness of the school and the academic success of the students (Hallinger & Heck, 1998; Halawah, 2005; Murphy, 2010). Turning around a school organization depends on the leaders' ability to change the attitudes and behaviors of its members. Murphy (2010) surmises that turning around a failing school requires moving people to understand the need for immediate action.

The literature is replete with leader characteristics most likely to lead people to change. Kouzes and Posner (2007), refer to the "kind of leadership that gets people to infuse their energy into strategies is called transformational leadership" (p. 122). Considered one of the foremost scholars of transformational leadership, Burke (n.d.) quotes Burns (1978) who contends that the transformational leader "looks for potential motives in followers, seeks to satisfy higher needs, and engages the full person of the follower" (para. 7). The result "is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents" (as cited in Antonakis et al., 2004, p. 173). In 1985 Bass operationalized Burns' research and developed the MLQ, which assesses the presence of behaviors associated with transformational leadership as well as three other dimensions of leadership. Bass asserts that by engaging in transformative leadership behaviors, leaders transform followers (as cited in Antonakis, Cianciolo, & Sternberg 2004, p. 175).

This study examines schools in the transformation process and the leading indicators (variables) that may serve to signal if schools are on track for future success. The following research questions guided this component of the larger 2-year study: Do differences exist in staff reported transformational leadership behaviors between turnaround and traditional schools?

1. Do differences exist in grades 3-8 math and reading scores between turnaround and traditional schools as measured by the Ohio Achievement Assessment?
2. Do differences exist between turnaround and traditional school staff in the grades (A –F) they assign their schools in relationship to perceived school climate?

Methods

The study included 510 teachers and 16 principals from 16 K – 8 school buildings in the Cleveland Metropolitan School District (CMSD) in Cleveland, Ohio. Eight of the lowest performing schools, identified as turnaround schools were demographically matched to eight traditional schools on the following seven variables: (a) student enrollment, (b) free and reduced lunch rate, (c) achievement rating on state report card, (d) average teacher tenure, (e) performance index score, (f) humanware safety factor (number of violent incidents), and (g) average number of subgroups for adequate yearly progress.

The distinct intervention strategies or "treatments" shared by the eight turnaround schools include a dedicated Assistant Superintendent, a dedicated full-time curriculum specialist, a full-time assistant principal, a part-time on-site leadership coach, a scope and sequence core curriculum plan, a part-time data analyst, a significantly increased professional development plan and additional resources for parent support groups.

Instruments and Data Analysis

The MLQ is a useful 45-item questionnaire on a 5-point Likert-type scale that measures key leadership and effectiveness behaviors shown in previous research to correlate to organizational and individual success. The instrument assesses both how teachers perceive the leadership ability of their principals, as well as how the principals perceive their own abilities. They are assessed on 12 subscales, which are attributed to four leadership styles: (a) *Transformational Leadership* includes assessment of idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized consideration behaviors; (b) *Transactional Leadership* includes assessment of contingent reward and management-by-exception (active) behaviors; (c) *Passive Avoidant* includes assessment of management-by-exception (passive) and laissez-faire behaviors and (d) *Outcomes of Leadership* includes assessment of extra effort, effectiveness, and satisfaction (Avolio & Bass, 2004).

In addition to the MLQ, the 526 teachers and principals were asked to rate the overall school climate in their buildings with a letter grade of A, B, C, D or F (A being the highest) in consideration of the following three questions:

1. I feel there is a positive climate in my school.
2. The leadership in my school is open to change.
3. My school leadership is upbeat and creates a pleasant working environment.

Both the MLQ and the perceptions of school climate grade ratings were self-administered and confidentially number coded by school using (T) for teachers and (P) for principal.

A general linear model (GLM) is used to analyze the study data. As an extension of the linear regression model, a GLM is a valuable tool because it allows for the discovery of correlations between more than one independent variable and identifies those that remain unchanged by linear transformations.

Findings

Research question one examines if differences exist in staff reported transformational leadership behaviors between turnaround and traditional schools. Results of the ANOVA, $F(1, 11)=13.12$, $p=.000$ at .05 significance level, indicate that the turnaround schools had significantly higher mean ratings on all but one (Management by Exception-Passive) of the 12 MLQ subscales than did the traditional schools. The average subscale rating for the traditional schools was 2.298, with a standard deviation of 0.658, and the average subscale rating for the turnaround schools was 2.457, with a standard deviation of 0.637.

As depicted in the mean comparisons in Table 1, teachers in the eight turnaround schools were significantly more likely to ascribe transformational leadership qualities (Idealized Influence – Attributed [IA], Idealized Influence – Behavior [IB], Inspirational Motivation [IM], Intellectual Stimulation [IS], and Individual Consideration [IC]) to their principals than the teachers in the eight traditional schools.

Table 1

Mean Ratings on MLQ Subscales for Turnaround and Traditional Schools

Variable	Turnaround Schools	Traditional Schools
Idealized Attributes		
Leaders	3.35	3.24
Raters	2.86	2.49
Idealized Behaviors		
Leaders	3.41	3.38
Raters	2.82	2.51
Inspirational Motivation		
Leaders	3.53	3.56
Raters	3.02	2.68
Intellectual Stimulation		
Leaders	3.00	3.15
Raters	2.45	2.17
Individualized Consideration		
Leaders	2.95	2.84
Raters	2.43	2.05

On the MLQ scales measuring overall leader effectiveness (Extra Effort, Effectiveness, and Satisfaction), turnaround teachers were significantly more likely to assign their principals higher averages on all three measures than teachers in the traditional schools. Additionally, teachers and principals in the turnaround schools demonstrated more alignment in their perceptual rankings than the teachers and principals in the traditional schools. Response comparisons between the teachers and principals in the traditional schools show consistently larger variance between the principals' average frequency rating of themselves and the teachers' average frequency rating of them on measures of extra effort, effectiveness and satisfaction. Table 2 presents the mean ratings.

Table 2

Mean Ratings on Overall Leader Effectiveness for Turnaround and Traditional Schools

Variable		Turnaround Schools	Traditional Schools
Extra Effort			
	Leaders	3.58	3.38
	Raters	2.78	2.48
Effectiveness			
	Leaders	3.50	3.47
	Raters	2.87	2.41
Satisfaction			
	Leaders	3.31	3.50
	Raters	2.82	2.42

Research question two examines if differences exist in grades 3-8 reading and math scores between turnaround and traditional schools as measured by the Ohio Achievement Assessment over a three-year period (2008 – 2011). Results indicate that the traditional schools significantly outperformed the turnaround schools in both reading and math. The reading and math scores are standardized using the NCE (normal curve equivalent) to allow all scores to be on the same scale with a mean of 50. The range of scores was from 0 to 99. To make this conversion, each original score was transformed into a Z-value by using the scaled mean and standard deviation of each year, grade, and subject.

As depicted in Table 3, at the .05 significance level, the traditional schools' reading score averages are significantly higher than the turnaround schools (F = 9.93, p = 0.002). The average NCE reading score for the traditional schools is 31.270, with a standard deviation of 7.180. The average NCE reading score for the turnaround school is 28.752, with a standard deviation of 6.350. Similarly, the traditional schools' average NCE math score averages are significantly higher than the turnaround schools (F=20.191, p=0.000). The average NCE math score for the traditional schools is 31.533, with a standard deviation of 7.126. The average NCE math score for the turnaround schools is 28.048, with a standard deviation of 6.149.

Table 3

Average NCE Reading and Math OAA Scores for Turnaround and Traditional Schools

	Turnaround Schools		Traditional Schools		
	NCE Score	*SD*	*NCE Score*	*SD*	*p*
Math	28.048	6.149	31.533	7.126	.002
Reading	28.752	6.500	31.270	7.180	.000

Research question three examines if there are differences in how staff perceive the overall school climate between the turnaround and traditional schools. Results of the two sample t-test t(-3.94), p = 00 found that the turnaround schools assigned significantly higher grades when rating their school climate than the traditional schools. The average grade assigned to the turnaround and traditional schools (p < .05) was 2.7 and 2.4 respectively.

Discussion

Presently, policy-makers and the wider external public perceive gains in standardized test scores as the identifying marker to gauge measures of success in low performing schools. The findings in this study, however, add to a growing body of research suggesting that indicators of success may be broader in scope

than the benchmarks associated with academic gains alone.

If research suggests a relationship between effective leadership, perceptions of school climate and academic improvement (Halawah, 2005; McMurrer 2012;), then fostering leading indicators, such as the significant variables in this study seem not only imperative, but also a common sense best practice approach for schools showing success.

Effective Leadership for Turnaround Schools

Effective building leadership has shown to positively influence the learning environment and student academic gains (Halawah, 2005; Hallinger & Heck, 1998, Murphy, 2010; Zullig et al., 2010). Facilitating the dramatic change required to turnaround failing schools requires leadership capable of organizational transformation. While Burns (1978) appropriately captured the skills required for transformational leadership as the process of moving the organization to a higher level, Caldwell, et al. (2012) assert the organizational challenges in today's society requires transformational leadership that draws the "attention of followers and inspires them to a new vision of what is possible-within their organization, within themselves, and within their communities" (p. 184).

As illustrated in the MLQ study results, teachers in the turnaround schools believe their leaders demonstrated more of the characteristics of transformational leadership required for sustained change and growth. Instituting new leadership in the turnaround schools supports recent literature noting that transformative leaders must pursue innovative answers to old problems that challenge current belief systems (Jones, Harris & Santana, 2008). Principals, who are perceived to be transformational such as in the turnaround schools, are more likely to engender learning environments where staff members perceive their contributions are valued. Teachers who feel appreciated, connected, and energized by their colleagues bring out the best in their students (Beaudoin, 2011), and Cohen et al., (2009) site the principal as one of the most critical factors in determining the climate of the school.

The Role of School Climate in Turnaround Schools

The findings show that the teachers and principals in the turnaround schools are significantly more likely to assign their schools a higher grade on overall positive climate than the traditional schools in the study. Literature continues to point to the connections between positive climate and improved academic achievement (Cohen, McCabe, Michelli, & Pickeral, 2009; Halawah, 2005; Shocket, Dadd, Ham & Montague, 2006). In spite of compelling research supporting a positive school climate as a fundamental component in school effectiveness and student achievement, policymakers have been reluctant to recognize climate as a measurable leading indicator and a precursor to future success. In a report examining schools with federal improvement grants entitled, McMurrer (2012) notes that principals indicate they were able to build on the

early success of improved school climate to "push their instructional program" (p.8). Further, the schools included in McMurrer's study prioritized initiatives geared toward improving school climate before embarking on other objectives in the transformation process. Steps principals took to improve school climate include creating a shared vision, creating a feeling of community among teachers, students and parents, and addressing school safety, discipline, and student engagement. The current study utilized additional leadership and curricular support, on site leadership coaching, data analysis assistance, significantly increased professional development and additional resources for parent support groups.

Academic Gains in Turnaround Schools

Study results show that the reading and math scores in grades 3 - 8 in the turnaround schools were significantly lagging behind the traditional schools. If the standardized test scores are utilized as the only measureable indicator of schools on the track for success, the impact of the leadership and climate indicators would not merit the significant consideration in the decision making process. Cohen, et.al. (2009) point to a "growing awareness that we need to not only consider the measurement of cognitive gains, but also the social, emotional, and ethical dimensions of school life" (p.196).

Summary and Recommendations for Further Study

The results demonstrated that the turnaround schools perceived their leadership and climate to be significantly more effective than the traditional schools. And while all 16 schools are chronically low performing, the eight turnaround schools did not show measurable academic gains commensurate with the other data results. Utilizing academic gains as the single indicator in evaluating the progress of the transformation effort in the turnaround schools would eliminate consideration of compelling and significant empirical evidence that effective leadership and improved positive school climate are significant leading indicators that may predict the likelihood of future success.

The results of this investigation suggest that reliance on lagging indicators such as standardized test scores to determine the quality of the school turnaround process may be counterintuitive. Kowal and Ableidinger (2011) suggest allowing early indicators to take the lead in making strategic decisions to modify procedures to radically increase the probability of success. Further Kowal and Ableidinger recommend educational leaders at the district level act on early success or failure by collecting and analyzing data monthly, recognizing that true transformation is a marathon and not a sprint.

The authors of this study believe the findings lead to more areas of inquiry relative to evaluating the success of turnaround schools and several recommendations for further research are offered. The first recommendation includes a longitudinal analysis of the standardized test scores in the turnaround and traditional schools to measure student gains. The second recommendation is a

qualitative analysis to further examine the breadth and depth of what teachers and principals characterize as specific measures of improved school climate. Third, given the new teacher evaluation system in Ohio, the authors suggest an investigation of teacher perceptions of the relationship of teacher quality and school achievement. And the final recommendation for further study includes an examination of communication styles, personality traits, and ability to provide and facilitate a vision for turnaround school environments.

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