www.ijonses.net

Improvement Capacity in High-Poverty Rural Schools

Paula W. Tharp
Mississippi State University, United States

To cite this article:

Tharp, P.W. (2025). Improvement capacity in high-poverty rural schools. *International Journal on Social and Education Sciences (IJonSES), 7*(3), 257-271. https://doi.org/10.46328/ijonses.5037

International Journal on Social and Education Sciences
2025, Vol. 7, No. 3, 257-271 https://doi.org/10.46328/ijonses.5037

Improvement Capacity in High-Poverty Rural Schools

Paula W. Tharp

Article Info

Article History

Received:
21 February 2025
Accepted:
18 May 2025

Keywords

School improvement
High poverty schools
Rural school leadership
Internal coherence
Instructional leadership

Abstract

This study examines the capacity for improvement in high-poverty Mississippi schools by comparing internal coherence (IC) levels in Mississippi high-needs improving (MHN-I) and Mississippi high-needs struggling (MHN-S) schools. Despite decades of research identifying best practices in leadership and instruction, the state ranks among the lowest in national student achievement metrics. This research builds on the Internal Coherence Framework, which emphasizes the role of leadership, collaborative instructional practices, and organizational structures in fostering sustainable school improvement. The study utilized a quantitative approach, analyzing IC survey results from 19 schools through statistical tests, including t-tests and correlation measures. Findings indicate that MHN-I schools exhibit significantly higher IC levels than MHN-S schools, underscoring the importance of leadership that promotes shared instructional goals and professional collaboration. The results provide insights for policymakers, educators, and researchers interested in leveraging IC strategies to enhance educational outcomes in underperforming schools. Future research should explore the longitudinal impact of IC interventions and the role of external supports in sustaining coherence-driven school improvement.

Introduction

Educational research underscores the pivotal role of leadership in improving school performance, particularly in high-poverty contexts (Elmore, 2008; Fullan & Quinn, 2016; Grissom et al., 2021). Despite available research on effective practices, Mississippi schools face persistent challenges in elevating student achievement. This study investigates the capacity for instructional improvement in Mississippi high-needs improving (MHN-I) and Mississippi high-needs struggling (MHN-S) schools by analyzing their internal coherence levels, which reflect their ability to engage in sustained instructional improvements (Elmore et al., 2014).

Mississippi consistently ranks among the lowest-performing states in student achievement, as measured by national assessments such as the National Assessment of Educational Progress (NAEP). Many schools struggle with systemic challenges, including high poverty rates, inadequate resources, and difficulties in recruiting and retaining effective educators. Research indicates that school leadership plays a critical role in shaping the conditions necessary for improvement, yet many struggling schools lack the internal structures to support sustained instructional growth (Leithwood et al., 2004; Marzano et al., 2005).

The concept of internal coherence (IC) as a framework for understanding how schools organize themselves to support continuous improvement holds promise to guide school leaders in the work of school improvement. Internal coherence refers to the collective capacity of educators to engage in deliberate, sustained improvements in teaching and learning (Elmore et al., 2014). Schools with high levels of IC exhibit strong leadership, shared instructional norms, and collaborative professional learning communities that drive collaborative instructional conversations to support increased student achievement. Conversely, schools with low IC may struggle with fragmented decision-making, inconsistent instructional practices, and weak organizational alignment based on the principles and components of the framework (Forman et al., 2017).

This study builds on existing research by examining the relationship between IC levels and school improvement status in Mississippi's high-needs schools. By comparing MHN-I and MHN-S schools, the research aims to identify key organizational and leadership factors that contribute to sustained academic progress. The findings will inform district leaders, policymakers, and educators seeking to implement targeted interventions that strengthen IC and promote student success.

Related Literature

Leadership is a crucial factor in shaping school improvement efforts, particularly in high-poverty contexts. Studies have shown that effective school leaders foster a culture of continuous learning, promote collaboration among teachers, and ensure that instructional practices align with student needs (Leithwood et al., 2004; Marzano et al., 2005; Grissom et al., 2021). Transformational leadership, which emphasizes vision-building and capacity development, has been linked to positive student outcomes (Leithwood & Jantzi, 2008).

In struggling schools, leadership challenges are exacerbated by resource constraints and staff turnover. Research indicates that principals in high-needs schools must employ adaptive leadership strategies, including data-driven decision-making, distributed leadership, and sustained professional development (Fullan, 2014). Schools with strong instructional leadership frameworks tend to exhibit higher levels of teacher engagement and instructional coherence, both of which contribute to improved student achievement (Grissom et al., 2021; Forman et al., 2017). Internal coherence (IC) refers to the extent to which a school's organizational structures, leadership, and professional culture support continuous improvement in instructional practices (Elmore et al., 2014). High-IC schools foster professional learning communities where teachers engage in collaborative problem-solving, align instructional strategies, and use data to inform their practices (Forman et al., 2017; Hargreaves & Fullan, 2012). Research suggests that when schools prioritize factors associated with the IC Framework, they are more likely to sustain improvements over time (Bryk et al., 2010).

Conversely, low-IC schools often face fragmented decision-making, inconsistent instructional expectations, and weak accountability structures. Studies have found that a lack of coherence in professional development, curriculum alignment, and leadership practices contributes to instructional stagnation (Elmore, 2008). Implementing coherence-building strategies—such as professional learning communities, structured instructional rounds, and teacher leadership models—has been shown to improve school performance (DuFour & Eaker, 1998;

City et al., 2009).

Newmann et al. (2001) provide evidence of the importance of attaching improvement efforts to a framework designed to focus on instructional coherence. According to Forman et al. (2017), the IC Developmental Logic (IC Framework) shown in Figure 1 and the guiding principles that follow provide a developmental pathway for increasing the collective efficacy of teachers and leaders in schools and school systems. The developmental nature of the framework provides school and school system leaders with a pathway to inform improvement efforts.

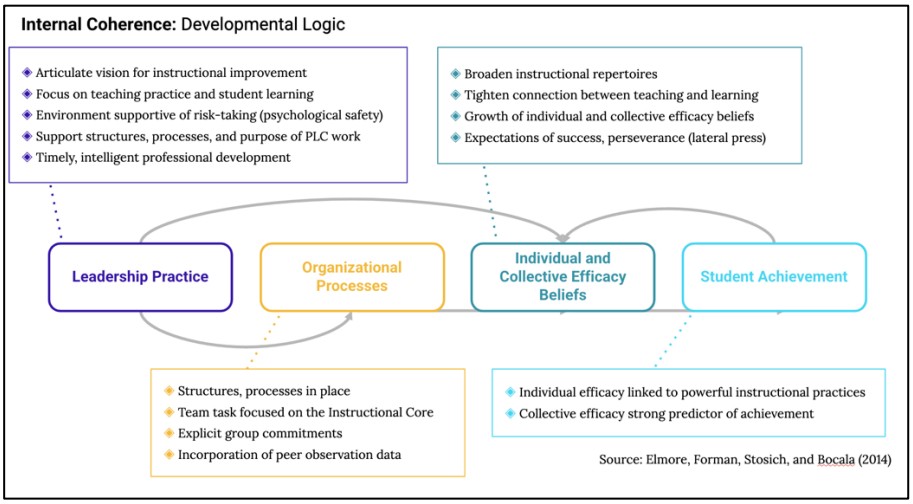

Figure 1: Internal Coherence Developmental Logic

The IC guiding principles (Forman et al., 2017, p. 7) ground the work of improvement providing a clear focus for school and system leaders as they engage in systemwide instructional improvement.

- Coherence is built around the Instructional Core.
- Improvement is a challenge of learning, not implementation.
- Mastery experiences change belief and behavior.
- Clinical practices and tools make research actionable.

The IC Survey (Elmore & Forman, 2012) is a clinical survey instrument designed to provide practitioners with information on the quality of existing school practices to support continuous instructional improvement, and more importantly, an actionable guide to improve the practices that most support improvement. The authors refer to the survey as a measure of a school's capacity for improvement. Survey items included in the IC Assessment Protocol are organized into the following domains: 1) Leadership for Learning; 2) Psychological Safety; 3) Professional Development; 4) Collaboration Around an Improvement Strategy; 5) Teachers' Involvement in Instructional Decisions; 6) Collective Efficacy; 7) Teams' Shared Understanding for Effective Practice; 8) Support for Teams; and 9) Team Processes. Results provide school and district leaders with information to inform efforts for increasing the organization's instructional coherence.

Research on high-needs schools indicates that those with strong instructional coherence-building practices experience greater student achievement gains compared to their counterparts with weaker coherence (Newmann et al., 2001). Schools that successfully close achievement gaps often share several key characteristics: a clear

instructional vision, collaborative leadership, data-informed instructional decision-making, and consistent professional development structures (Fullan & Quinn, 2016). Mississippi's high-needs improving schools provide a case study of how instructional coherence-building practices can foster long-term success.

Studies have also highlighted the role of external support in fostering IC in struggling schools. District-level leadership, state education policies, and targeted professional development programs have been shown to enhance schools' capacity for sustained instructional improvement (The Wallace Foundation, 2010). Understanding the interplay between school-level coherence and broader systemic supports is essential for designing effective interventions in high-needs educational settings.

While the research on coherence and school improvement is growing, several gaps remain. There is limited empirical evidence on the specific mechanisms through which internal coherence influences long-term student outcomes, particularly in the context of high-needs schools. Additionally, studies on coherence-building strategies often focus on urban settings, leaving questions about their applicability in rural and resource-limited environments. Further research is needed to explore how the IC Framework might be adapted to diverse educational contexts and sustained over time.

Method

Instrument

This study employed a quantitative research design to measure IC levels in MHN-I and MHN-S schools. A cross-sectional survey approach was utilized to gather data from school leaders and teachers. The Internal Coherence Survey (Elmore & Forman, 2012) was the instrument used, assessing dimensions for leadership for instructional improvement, professional collaboration, and organizational structures that support sustained learning. The Internal Coherence Survey is a validated instrument developed by Elmore and Forman (2012) with established reliability in assessing coherence-related constructs. To ensure reliability in this study, Cronbach's alpha was calculated for survey subscales, confirming internal consistency.

Participants

Schools participating in the study were identified as high-needs schools based on the reported percentage of students who qualified for free and reduced lunch programs and categorized as either improving or struggling. To categorize schools as improving or struggling, the researcher reviewed five years of school performance data from the state's accountability model. Schools were designated as Mississippi High-Needs Improving schools (MHN-I) if the schools demonstrated consistent gains in student achievement, as measured by an increase in School Level Performance (SLP) scores over five consecutive academic years. Conversely, schools identified as Mississippi High-Needs Struggling schools (MHN-S) exhibited stagnant or declining performance over the same period. By using a longitudinal approach to school classification, the study ensured the distinctions between improving and struggling schools were based on sustained trends rather than short-term fluctuations.

A total of 19 elementary schools (Table 1) participated in the study, including 12 MHN-I and seven MHN-S schools (Table 1). A total of seven matched school pairs consisting of one MHN-I and one MHN-S were compared for some of the null hypotheses. For other null hypotheses, all schools' data on the IC Survey were analyzed. For hypotheses focused on comparing MHH-I and MHN-S schools, the following factors were used to match schools.

- Baseline school performance data ensuring similar academic starting points
- School size accounting for variations in instructional resources and student-teacher ratios
- Poverty levels controlling for socioeconomic disparities among students matching based on poverty band
- Student demographics ensuring alignment in racial and ethnic composition
- Historical performance trends differentiating between schools with sustained improvement and those with stagnant or declining performance

Table 1. Available Schools and Participating Schools

Percent Poverty Category	2017 MS School Population	2017 MS Elementary Schools Population	10 Percent of Schools Targeted	Total Matched Pairs for Targeted	Total Participating Schools	Total Participating Matched School Pairs
40-55	53	16	2: 1I, 1S	1	2	1
56-70	136	40	4: 2I, 2S	2	2	1
71-85	152	76	8: 4I, 4S	4	6	2
86 and greater	359	195	20: 10I, 10S	10	9	3
Total	700	327	34: 17I, 17S	17	19	7

Note: I = Improving; S = Struggling

The poverty levels of schools (Table 1) were categorized into one of four bands to ensure balanced comparisons and to allow for a more granular analysis of IC differences across varying levels of economic hardship. This stratification ensured that the study accounted for the nuanced effects of poverty on school performance and internal coherence.

- 40-55% poverty – Schools with moderate poverty levels but still classified as high-needs
- 56-70% poverty – Schools facing substantial economic challenges
- 71-85% poverty – Schools with a high percentage of students from low-income backgrounds
- 86% or greater poverty – Schools with the highest poverty concentration, indicating extreme economic disadvantage

Statistical Analysis

The study employed inferential statistical analyses. The Internal Coherence Survey results were analyzed using:

- Paired-samples t-tests to compare IC scores between MHN-I and MHN-S schools and principal and teacher perceptions of IC in each researched school.
- Independent-samples t-tests to examine mean differences between principal time in leadership in researched school subgroups.

- Pearson's correlation and Kendall's tau b analyses to assess relationships between IC levels and school performance indicators.

By integrating multiple data sources and analytical techniques, this methodology provides a robust approach to examining the relationship between IC and school improvement in high-needs Mississippi schools.

Calculation of a school's IC level was determined using the **Internal Coherence (IC) survey** consisting of domains and factors as outlined in Table 2 (Elmore & Forman, 2012). The IC survey has a total of 50 items categorized into three domains. Each domain is divided into one or more factors. Each factor is assessed with several items as noted in Table 2. To test the internal consistency of the items, a Cronbach's alpha coefficient was calculated with results included in Table 2.

Table 2. Internal Coherence Survey Domains, Factors, and Item Counts

Type	Title	Number of Items	Cronbach's alpha coefficient
Full Survey	Internal Coherence Survey	**50**	.975
Domain One	Leadership Practices for Instructional Improvement	**19**	.960
Factor One	Leadership for Learning	8	.961
Factor Two	Psychological Safety	6	.912
Factor Three	Professional Development	5	.922
Domain Two	Organizational Processes and Teams	**25**	.951
Factor One	Improvement Strategy Collaboration	4	.955
Factor Two	Teachers' Involvement in Instructional Decisions	6	.931
Factor Three	Teams' Shared Understanding of Effective Practice	4	.910
Factor Four	Support for Teams	5	.919
Factor Five	Team Processes	6	.947
Domain Three	Teachers' Efficacy Beliefs	**6**	.907
Factor One	Collective Efficacy	6	.907

Survey items in each domain were scored by participants on a *Likert scale (1–5),* with higher scores indicating stronger coherence. Teachers and school leaders in participating schools completed the IC Survey. Each respondent received an overall IC score along with separate scores for each survey domain. An aggregated IC score was calculated for all teachers who participated. Similarly, each principal's individual IC score was totaled to allow for comparisons between principal and teacher perceptions of school IC. The aggregated teacher score and the principal's score were combined to determine the overall school IC score. These three measures—the aggregated teacher IC score, the principal IC score, and the overall school IC score—enabled appropriate statistical testing aligned with the intent of each hypothesis (see Table 3 for data used in statistical testing).

To determine whether schools were improving or struggling, five years of state assessment data using Quality of Distribution Index (QDI) scores and School Level Performance (SLP) points were analyzed. Changes in these

metrics—either gains or losses—served as indicators of school improvement or decline. The dependent variable, school performance, was represented by the net change in QDI and SLP scores combined, enabling statistical comparisons between MHN-I and MHN-S schools. The methodology ensured that IC was assessed as a continuous variable while the dependent variable reflected long-term performance trends, facilitating a robust analysis of the relationship between coherence and school improvement.

Table 3: Data Set for Statistical Testing

School	Ach Cat	Pov. Range	Principal Years in Surveyed School	Staff IC	Principal IC	School IC
1 1A	MHN-I	1	Less than 3	202	200	202
2 1B	MHN-S	1	More than 10	172	171	172
3 2A	MHN-I	3	Less than 3	179	176	179
4 2B	MHN-S	3	Less than 3	190	208	191
5 3A	MHN-I	3	4 to 6	203	195	203
6 3B	MHN-S	3	4 to 6	190	218	192
7 4A	MHN-I	4	Less than 3	212	196	211
8 4B	MHN-S	4	More than 10	189	160	187
9 5A	MHN-I	4	7 to 9	216	182	214
105B	MHN-S	4	3	162	236	166
116A	MHN-I	4	4 to 6	237	250	238
126B	MHN-S	4	7 to 9	191	201	192
137A	MHN-I	2	Less than 3	197	203	198
147B	MHN-S	2	More than 10	165	209	167
158	MHN-I	3	Less than 3	163	183	165
169	MHN-I	4	Less than 3	215	222	216
1710	MHN-I	3	Less than 3	142	170	143
1811	MHN-I	4	7 to 9	211		
1912	MHN-I	4		185		

Note. Ach Cat = Achievement Category; MHN-I = Mississippi High-Needs Improving; MHN-S = Mississippi High Needs Struggling; Pov Range = Poverty Range: 1 = 40 to 55 percent; 2 = 56 to 70 percent; 3 = 71 to 85 percent; 4 = 86 percent and greater; IC = Internal Coherence; IC score range = 0 to 250; School IC is an overall average of each staff member's and principal's total scores.

Results

The study tested nine null hypotheses associated with participating schools' IC levels and longitudinal school outcomes. An IC score was calculated for each school based on responses of teachers and principals on the IC survey. Longitudinal school outcomes derived from five years of state accountability results were used in

statistical analysis. Statistical analyses of each null hypothesis differences or relationships is discussed in the following paragraphs.

The first null hypothesis, "there is no significant difference in IC levels between MHN-I and MHN-S schools," was rejected. A paired-samples *t*-test found a statistically significant difference in the mean IC scores of MHN-I and MHN-S schools ($t = 3.165$; $p = .019$; $p < .05$). Schools categorized as MHN-I had consistently higher IC scores across all survey dimensions, including leadership for instructional improvement, teacher collaboration, and alignment of instructional practices. Teachers in MHN-I schools reported greater engagement in structured professional learning communities, a stronger shared vision for improvement, and more consistent instructional feedback from leadership. In contrast, MHN-S schools exhibited weaker alignment in instructional priorities, less frequent collaboration among staff, and lower levels of trust in leadership's ability to drive sustained improvement.

The second and third null hypotheses considered the relationships between levels of IC and school performance in MHN-I and MHN-S schools. Both null hypotheses were accepted. The mean of points differences in the Quality of Distribution Index (QDI) score over three years and School Level Performance (SLP) scores over two years were calculated for each school to consider the relationship of school performance and IC levels. The Kendall's tau-b correlation analysis for MHN-I schools and IC levels showed a *moderate positive correlation* not at the level of significance (QDI: $\tau_b = .289$, $p = .245$, $p > .05$; SLP: $\tau_b = .200$; $p = .421$, $p > .05$). The Kendall's tau-b analysis for MHH-S schools and levels of IC indicated a *small negative correlation* not at the level of significance (QDI: $\tau_b = -.390$, $p = .224$, $p > .05$; SLP: $\tau_b = -.143$, $p = .652$; $p > .05$).

Null hypotheses four and six considered the differences and relationship, respectively, between principal and teacher perceptions of IC in MHN-I elementary schools. Null hypothesis five was accepted finding there is, in fact, no significant difference in the perceptions of the school principal and teachers in high IC schools as confirmed by a paired samples *t*-test ($d = .054$; $p = .868$; $p > .05$). Null hypothesis six was rejected as the Pearson's product-moment correlation showed a strong correlation ($r = 0.775$; $p = .008$; $p < .01$) and thus a statistically significant relationship between the principal's perceived level of coherence and the teachers' perceived level of coherence in MHN-I elementary schools.

Null hypotheses five and seven considered the relationship and difference, respectively, between the principal's perceived level of coherence and the teachers' perceived level of coherence in MHN-S elementary schools. Null hypothesis five was accepted with the Kendall's tau-b statistical testing indicating a moderate correlation ($d = .623$; $p = .150$; $p > .05$) not reaching the level of significance. Null hypothesis seven was accepted as well with the Kendall's tau b indicating a moderate negative correlation, not at the level of significance, between principal and teacher perceived IC levels in MHN-S schools ($\tau_b = -.333$; $p = .293$).

Null hypothesis eight theorized there is no significant difference in the level of coherence in elementary schools with principals with less than three years in the leadership role in the surveyed school and the level of coherence in elementary schools with principals with three or more years in the leadership role in the surveyed school.

Principals' years of experience leading the surveyed school were categorized as less than three years and three or more years in the leadership role at the surveyed school. In the researched schools, nine principals had been serving in their schools for less than three years and eight had served in their schools for three or more years. An independent samples *t*-test indicated no statistically significant differences in the schools' levels of IC ($t = -.365$; $p = .721$; $p > .05$).

Hypothesis nine stated there is no significant relationship between a principal's total years of experience in a leadership role and the school's level of coherence. The null hypothesis was accepted with a Kendall's tau-b correlation test showing no significant difference ($\tau_b = -.026$, $p = .895$, $p > .05$). The finding indicates that IC development was not strongly influenced by the principal's total years of experience. There were eight principals with less than three years of experience; one principal with three years' experience; three principals with four to six years' experience; two principals with seven to nine years' experience; and three principals with 10 or more years of experience.

Discussion

Key findings from the research include the following underscoring the importance of IC as a critical factor in school improvement efforts. Discussion following on the results of hypotheses statistical testing provides support and connection to the key findings.

1. MHN-I schools demonstrated statistically significantly higher IC levels, particularly in leadership effectiveness, collaboration, and instructional alignment.
2. Higher IC scores correlated with sustained improvements in school performance metrics over a five-year period.
3. Leadership's role in fostering coherence was the strongest predictor of student achievement gains.
4. Leadership's level of experience in a leadership role and the number of years serving as the leader in the high-poverty elementary schools in the research study were not significant factors related to the schools' level of IC.

A paired-samples *t*-test for HO1 revealed a *statistically significant difference in IC levels* between MHN-I and MHN-S schools ($p < .05$) indicating leaders in MHN-I schools are more strategically and intentionally engaging in instructional leadership practices measured on the IC Survey. Schools categorized as MHN-I had consistently higher IC scores across all survey dimensions, including leadership for instructional improvement, teacher collaboration, and alignment of instructional practices. Teachers in MHN-I schools reported greater engagement in structured professional learning communities, a stronger shared vision for improvement, and more consistent instructional engagement with leadership. In contrast, MHN-S schools exhibited weaker alignment in instructional priorities, less frequent collaboration among staff, and lower levels of trust in leadership's ability to drive sustained improvement. When considering the results from a school performance standpoint, schools with higher IC scores showed greater gains in student achievement over the five-year data cycle, whereas lower IC schools displayed stagnation or declines in academic performance. Among the strongest predictors of student success were the leadership's commitment to fostering a shared instructional focus and the presence of structured teacher

collaboration practices.

The results highlight the critical role of IC in school improvement, particularly the importance of leadership focus on the tenets of IC including collaborative practices and alignment between instructional goals and implementation. The findings suggest that coherence-building efforts should be a priority for educational policymakers and district leaders aiming to enhance student achievement in high-poverty schools. The *relationship of IC levels and school performance* was tested in HO2 and HO3. In HO2, the statistical testing results were positive. The p-values of MHN-I schools were .245 for Quality of Distribution Index (QDI) scores and .421 for School Level Performance (SLP) scores. The results, while not statistically significant, indicate a *moderate positive correlation*. For HO3, the statistical testing results were negative with MHN-S p-values of .224 for QDI scores and .652 for SLP scores. The results, while not statistically significant, indicate a *small negative correlation.* An interesting investigation to consider, with a larger sample size, is whether the same results of positive correlations in MHN-I schools and negative correlations in MHN-S schools would show similar results at a level of significance. It is noteworthy to see the positive correlation (not significant) in MHN-I schools and the negative correlation (not significant) in MHN-I schools suggesting the finding could, with increased data samples and further statistical testing, support the usefulness of applying the IC framework as a guide for supporting principals and district leaders in the efforts for continuous improvement in high needs schools.

When comparing *differences in the school leaders' and teachers' perceptions of IC practices* as measured by comparing mean scores of each group on the IC Survey (HO4 and HO5), research findings showed that differences in MHN-I schools were not statistically significant with a p-value of .868. This finding suggests that the principal and the teachers perceive instructional leadership practices and the level of engagement of teachers in continuous improvement process similarly in high-needs improving schools. In HO5, the researcher compared the mean IC scores of principals and teachers in each MHN-S school participating in the study. The p- value of .150 does not rise to the level of significance indicating the difference in the perceptions of instructional leadership practices in MHN-S schools was not significantly different between the school principal and staff. However, it is interesting to consider the difference in p-values for MHN-I and MHN-S schools for HO4 and HO5. For MHN-I schools, the p-value of .868 is a high value indicating weak evidence against the HO4; conversely, the p-value of .150 for MHN-S schools, while not rising to the level of statistical significance, indicates a low value, or strong evidence against HO5. The difference in the two p-values suggests more data from a larger sample size for further testing is warranted to further explore the phenomenon.

Two of the null hypotheses considered the *relationship between school leaders' and teachers' perceptions of IC practices* of the MHN-I and MHN-S schools (HO6 and HO7). For the 10 MHN-I schools, statistical testing showed a significant relationship between the two groups with a p-value of .008, significant at the .01 level. Conversely, in the seven MHN-S schools, a p-value of .293 did not indicate a statistically significant correlation. When considering the results, it is interesting to note the perceptions of IC practices of principals and teachers in MHN-I were highly correlated, while the perceptions of IC practices in MHN-S were not statistically significantly correlated. This finding could suggest further confidence in the use of the IC developmental logic, guiding principles, and survey to guide the work of leaders in high-poverty schools.

The final two hypotheses (HO8 and HO9) tested the experience of school leaders (Table 4) and levels of IC in their schools. See Table 4 below for the distribution of principals' years of experience and related school type. In HO8, the researcher focused on the leaders' years of experience in the researched school in two categories: 1) Eight principals with less than three years of experience, and 2) Nine principals with more than three years of experience. Statistical testing found no significant difference between the principals' years of experience and the schools' level of IC ($p = .721$). In HO9, the researcher focused on the relationship between the leaders' years of experience and school IC. The correlation was not significant ($\tau_b = -.026$, $p = .895$). With these findings, the null hypothesis is accepted. There is no significant relationship between the principal's years of experience and School IC. The results indicate an interesting consideration about leadership experience. The finding could suggest years of experience is not a key factor in implementing practices aligned with improving School IC. It is interesting to note that seven of the 11 principals in the research sample were leading schools identified as MHN-I with less than three years of experience, while five of nine principals with four or more years of experience were leading schools identified as MHN-S schools. Further, the ratio of MHN-S schools led by more experienced principals (more than four year's of experience), based on the research sample, is 5:2. While the sample size for this study was small, this finding is worth further investigation potentially adding promise to the use of the IC framework, developmental logic, and guiding principles as a guide for leadership in high poverty schools. More research is warranted based on the findings.

Table 4. Principals' Years of Experience and Researched School Types Led

Years of Experience Categories	N Per Category in Researched Schools
Less than 3	8 total: 7 of 8 leading MHN-I schools 1 of 8 leading MHN-S school)
3	1 total leading a MHN-S school
4-6	3 total: 2 of 3 leading MHN-I schools 1 of 3 leading MHN-S school
7-9	3 total: 2 of 3 leading MHN-I schools 1 of 3 leading MHN-S school
10 or more	3 total: All 3 leading MHN-S schools

Evidence from the study suggests the construct of Internal Coherence (IC) (Forman et al., 2017) as a viable developmental pathway informing school leaders of focus and strategy to increase student achievement in high-needs schools. Key findings in the research study supporting this theory include:

- A statistically significant difference in levels of IC in MHN-I and MHN-S schools
- No statistical significance in the differences in perceptions of IC between principals and teachers in MHN-I schools with a statistically significant relationship between the two
- A moderately positive correlation between IC and school performance in MHN-I schools with a small

negative correlation in MHN-S schools – neither rising to the level of significance

- No significant difference in years of leadership experience in surveyed schools and levels of school IC

The findings from the study emphasize the critical role of leadership in fostering internal coherence and sustainable school improvement. Schools classified as MHN-I consistently exhibited higher levels of IC, with strong leadership that promoted shared instructional goals, professional learning communities, and data-driven decision-making. These leaders actively facilitated collaboration among staff, ensuring that instructional expectations were clear and consistently reinforced. Leadership in MHN-I schools focused on building teacher capacity, creating a culture of shared responsibility for student success, and embedding professional development into daily practice.

In contrast, MHN-S schools exhibited weaker IC scores, often due to inconsistent leadership practices, lack of strategic vision, and minimal instructional alignment. Principals in these schools frequently cited challenges such as staff resistance to change, high turnover rates, and limited district support as barriers to improvement. The absence of a structured approach to instructional coherence led to fragmented efforts that failed to generate sustained academic progress.

The literature base on collective efficacy is applicable to the exploration of coherence between school leaders and teachers. With an effect size of 1.57 (Visible Learning, n.d.), Dr. John Hattie identifies collective teacher efficacy as one of the strongest predictors of student achievement. Goddard, et al. (2000), designed an instrument to assess teacher collective efficacy (TCE) and compared levels of TCE to student achievement in a large midwestern district. The authors theorized that teacher teams with higher collective efficacy would persist in attaining challenging goals with the opposite effort from teacher teams with lower collective efficacy. Findings from the study indicated a positive association of collective teacher efficacy and student achievement. Additionally, the authors theorized the importance of considering teachers' analysis of what it takes in their school to meet the needs of the students including availability of resources, support from community and leadership, and barriers or restraints to overcome to attain the task of increasing student achievement as a component of collective teacher efficacy. This construct of "analysis of the teaching task" (Goddard et al., 2000, p. 485) considered alongside the teachers' perception of group competence to achieve the task are key elements of the construct of collective teacher efficacy according to Goddard et al. (2000).

Further, the research finding of no significant difference in the years of leadership experience and school IC scores suggests the IC framework as a viable tool for early-career school leaders (as well as mid- to late-career school leaders) in impacting collecting efficacy among teachers. Elmore et al. (2014) define internal coherence (IC) as "a school's capacity to engage in deliberate improvements in instructional practice and student learning across classrooms, over time" (p. 3). They describe coherence as a continuous cycle in which educators work collaboratively, assess the impact of their efforts, refine strategies, and adjust practices based on data analysis. This conceptualization of IC establishes an important connection to the work of Goddard et al. (2000), who emphasized the role of competence and task alignment in building collective efficacy. The IC framework developed by Elmore and colleagues (Forman et al., 2017) offers school leaders a structured approach for

establishing the systems, structures, processes, and ways of engaging teachers in the work of school improvement to develop collective efficacy among teachers and staff, positioning it as a key lever for school improvement.

Policy and Practice Implications

While research is clear on school leadership skills and practices that matter most (Grissom et al., 2021), the research is less clear on actionable models to follow when engaging in effective leadership practices (Forman et al., 2017). The results of this research project underscore the need for policies that prioritize leadership development in high-needs schools. School district and state education agency policies and practices to support Mississippi schools most in need could consider using the IC framework, developmental logic, and guiding principles as foundational anchors for school leaders providing them with a developmental pathway for leadership practices focused on organizational learning and collective efficacy around the most impactful instructional practices.

The literature supports using an evidence-based framework as an essential tool for guiding continuous improvement and assisting leaders tasked with implementing the most effective practices (Newmann et al., 2001; Ford et al., 2020). Implications of the research findings in this study support the use of the IC framework and guiding principles to guide implementation of targeted professional development support for school leaders ensuring training and coaching support in:

- Anchoring improvement efforts in the IC Developmental Logic framework and guiding principles
- Developing and sustaining professional learning communities to engage teachers in instructional improvement learning experiences based on the Instructional Core (Cohen & Ball, 1999)
- Implementing data-driven instructional practices
- Aligning curriculum, instruction, and assessment
- Cultivating a school-wide culture of continuous learning

The study's findings highlight the strong correlation between teacher collaboration and school improvement. In MHN-I schools, teachers reported higher levels of engagement in relevant professional learning activities, collaborative instructional discussions, and supportive risk-taking environments. These collaborative structures contributed to greater instructional consistency and alignment across grade levels. In MHN-S schools, however, limited opportunities for collaboration may have resulted in inconsistent instructional practices and weaker alignment with school-wide goals. The findings reinforce the impact of relevant, aligned, instructional collaboration among teachers and school leaders.

Conclusion and Future Research

The study affirms that internal coherence plays a critical role in school improvement, with MHN-I schools demonstrating significantly higher IC levels than their struggling counterparts. The presence of strong leadership, structured teacher collaboration, and clear instructional goals emerged as key differentiators between improving and struggling schools. These findings suggest that efforts to improve school performance should center on

developing coherence-building strategies that support sustained instructional alignment and professional learning. Future research should explore the long-term impact of IC interventions on student achievement, examining how coherence-building efforts evolve over time. Additionally, studies should investigate the role of district and state-level policies in shaping IC development, identifying systemic supports that contribute to school improvement. A comparative analysis of coherence-building strategies in urban, suburban, and rural high-needs schools could provide further insights into contextual factors that influence school improvement trajectories. By prioritizing internal coherence as a foundational element of school improvement, policymakers and educators can work towards creating sustainable models of instructional excellence, particularly in high-poverty settings where consistency and leadership stability are paramount.

References

Bryk, A. S. (2010). Organizing schools for improvement. *Phi Delta Kappan, 19*(7), 23-30.

City, E.A., Elmore, R.F., Fiarman, S.E., & Teitel, L. (2009). *Instructional rounds in education*. https://www.education.ne.gov/wp-content/uploads/2021/11/Instructional-Rounds-in-Education-Elmores-Instructional-Core.pdf

Cohen, D.K., & Ball, D.L. (1999). *Instruction, capacity, and improvement*. https://www.cpre.org/sites/ default/files/researchreport/783_rr43.pdf

Dufour, R., & Eaker, R. (1998). *Professional learning communities at work: Best practice for enhancing student achievement*. Solution Tree.

Elmore, R. F. (2008). *Improving the instructional core*. https://teacher.justinwells.net/Downloads/ improving_the_instructional_core_elmore_2008.pdf

Elmore, R. F., & Forman, M. L. (2012). *Internal coherence survey*. https://www.serpinstitute.org/ organizational-capacity-and-school-culture

Elmore, R. F., Forman, M. L., Stosich, E. L., & Bocala, C. (2014). The internal coherence assessment protocol & development framework: Building organizational capacity for instructional improvement in schools. https://files.eric.ed.gov/fulltext/ED564482.pdf

Ford, T.G., Lavigne, A.L., Fiegener, A.M., & Si, S. (2020, April). Understanding district support for leader development and success in the accountability era: A review of the literature using social-cognitive theories of motivation, *Review of Educational Research 90*(2), 264-307. https://doi.org/ 10.3102/003465431989972

Forman, M.L., Stosich, E.L., & Bocala, C. (2017). *The internal coherence framework.* Cambridge, MA: Harvard Education Press.

Fullan, M., Quinn, J. (2016). *Coherence: The right drivers in action for schools, districts, and systems*. Ontario Principals' Council and Corwin Press.

Goddard, R.D., Hoy, W.K., & Hoy, A.W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal 37*(2), 479-507. https://doi.org/10.3102/00028312037002479

Grissom, J. A., A. J., & Lindsay, C. A. (2021). *How principals affect students and schools: A systematic synthesis of two decades of research.* The Wallace Foundation. https://wallacefoundation.org/ report/how-

principals-affect-students-and-schools-systematic-synthesis-two-decades-research

Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.

Leithwood, K., & Jantzi, D. (2008). *Linking leadership to student learning: The contributions of leader efficacy*. https://journals.sagepub.com/doi/10.1177/0013161X08321501

Leithwood, K., Louis, K. S., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. https://wallacefoundation.org/ sites/default/files/2023-07/How-Leadership-Influences-Student-Learning.pdf

Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Association for Supervision and Curriculum Development.

Newmann, F. M., Smith, B. A., Allensworth, E., & Bryk, A. S. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Educational Evaluation and Policy Analysis, 23*(4), 297-321. https://journals.sagepub.com/ doi/abs/10.3102/01623737023004297

The Wallace Foundation. (2010*). Education leadership: An agenda for school improvement.* https://wallacefoundation.org/sites/default/files/2023-09/education-leadership-an-agenda-for-school-improvement.pdf

Visible Learning. (n.d.). *Collective teacher efficacy (CTE) according to John Hattie*. https://visible-learning.org/2018/03/collective-teacher-efficacy-hattie/

Author Information

Paula W. Tharp

https://orcid.org/0000-0002-8881-2411

Mississippi State University

Mississippi State, Mississippi 39762

United States

Contact e-mail: *ptharp@colled.msstate.edu*