International Journal of Educational Contemporary Explorations

ORIGINAL RESEARCH | e-Published: February 09, 2026
Vol. 3, No. 1, pp. 24-34 DOI: 10.69481/KEUW8018

Utilization of the Florida Assessment of Student Thinking (FAST): It's Contribution to Academic, Instructional, and Leadership Performance in Florida Charter Schools

Jennifer Agustin
St. Paul University Surigao, Surigao City, Philippines
Email: jenniferagustin18@gmail.com
ORCID: 0000-0001-7484-5346

1. Introduction

The shift toward progress monitoring–based assessment systems in the United States emerged from long-standing concerns that end-of-year standardized tests provided delayed and limited instructional value despite strong accountability demands under the No Child Left Behind Act and its successor, Every Student Succeeds Act (ESSA) (U.S. Department of Education, 2018; Hamilton et al., 2020). In response, Florida implemented the Florida Assessment of Student Thinking (FAST) beginning in the 2022–2023 school year as a coordinated screening and progress-monitoring system designed to generate timely data for instructional adjustment, leadership decision-making, and accountability, particularly within high-stakes environments such as charter schools (Florida Department of Education, 2023). Existing research has established that formative and progress-monitoring assessments can positively influence student achievement when data are systematically analyzed and used to guide instruction and leadership practices (Black & Wiliam, 2018; Brookhart & DePascale, 2023; Datnow & Park, 2019). However, empirical evidence remains limited on how newly implemented statewide progress-monitoring systems function in practice, especially in charter school contexts where accountability pressures are more pronounced and leadership effectiveness is closely tied to assessment outcomes (Berends et al., 2022; Dallavis & Berends, 2023). This gap is particularly evident in the lack of integrative models that examine the combined contributions of assessment utilization, instructional practices, and school leadership to student academic performance under FAST. Addressing this gap is significant because understanding how FAST is utilized beyond compliance can inform evidence-based policy, strengthen instructional decision-making, and support sustainable leadership practices in charter schools, thereby contributing to improved student learning outcomes and more equitable accountability systems in Florida and comparable education settings.

Aim of the Study

The study aimed to determine how the Florida Assessment of Student Thinking (FAST) was used in Florida charter schools and how this use contributed to students' academic performance through teachers' instructional performance and principals' leadership effectiveness.

Research Questions

1. To what extent was FAST used in Florida charter schools for student performance monitoring, analysis of assessment results, and decision-making?

2. What was the level of students' academic performance, teachers' performance, and principals' leadership performance during the implementation of FAST?
3. How did the use of FAST influence students' academic performance in Florida charter schools?
4. How did the use of FAST influence teachers' instructional performance and principals' leadership performance?
5. Did principals' leadership performance mediate the relationship between FAST utilization and students' academic performance?
6. Did teachers' instructional performance mediate the relationship between FAST utilization and students' academic performance?
7. What structural model best explained students' academic performance based on FAST utilization, teachers' performance, and principals' leadership performance?

Null Hypotheses

- H_o1. FAST utilization had no significant effect on the analysis and use of assessment results for decision-making in Florida charter schools.
- H_o2. The use of FAST assessment results had no significant effect on principals' leadership performance or teachers' instructional performance.
- H_o3. Principals' leadership performance had no significant effect on teachers' instructional performance or students' academic performance.
- H_o4. Teachers' instructional performance had no significant effect on students' academic performance.
- H_o5. Principals' leadership performance and teachers' instructional performance did not significantly mediate the relationship between FAST utilization and students' academic performance.

Theoretical Framework

This study was grounded in Kirkpatrick's Four-Level Evaluation Theory, which explained how programs and interventions were evaluated through reactions, learning, transfer, and results (Kirkpatrick & Kirkpatrick, 2006). In this study, the Florida Assessment of Student Thinking (FAST) was treated as an assessment intervention. The reaction level was reflected in how teachers, school leaders, and students engaged with FAST and perceived its relevance within the school system. The learning level was represented by the analysis of FAST results to determine student progress, learning gaps, and instructional needs. The transfer level was evident in the application of FAST data to instructional planning, classroom interventions, and leadership decision-making. The results level was reflected in measurable outcomes, including students' academic performance, teachers' instructional performance, and principals' leadership effectiveness.

The framework was further supported by data-driven decision-making theory in education, which emphasized that systematic use of assessment data informed instructional improvement and strengthened school leadership practices (Datnow & Park, 2019; Schildkamp et al., 2020). Within this perspective, FAST utilization functioned as the primary input that generated timely and actionable data. The effective analysis and use of these data influenced teaching strategies and leadership actions, which subsequently affected student learning outcomes.

Principals' leadership performance and teachers' instructional performance were positioned as mediating variables in the framework. Prior studies indicated that school leaders played a critical role in shaping data use cultures and supporting teachers in translating assessment data into classroom practice (Leithwood et al., 2020; Grissom et al., 2021). Similarly, teachers' capacity to interpret and apply assessment data was essential for improving instructional quality and student achievement (Brookhart & DePascale, 2023).

Overall, the theoretical framework assumed that effective utilization of FAST strengthened instructional practices and leadership decision-making, and that these interconnected processes collectively contributed to improved

academic performance among students in Florida charter schools (Kirkpatrick & Kirkpatrick, 2006; Datnow & Park, 2019).

Conceptual Framework

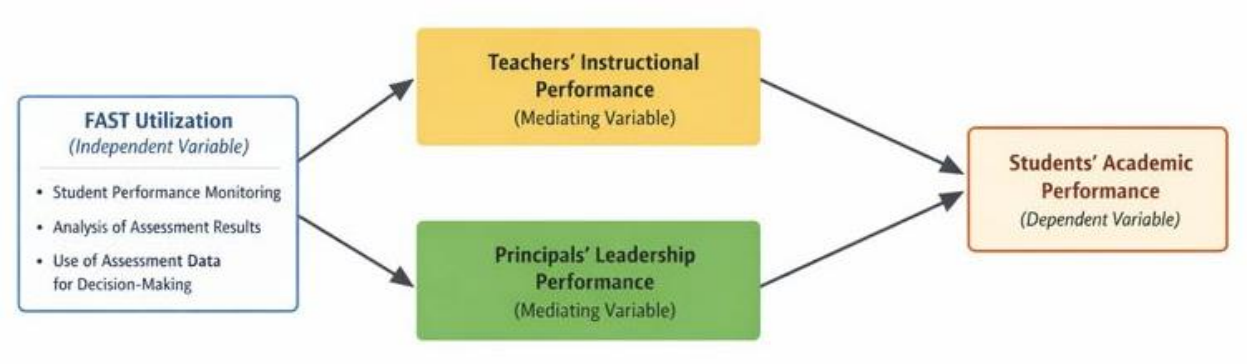

Figure 1. Schematic Diagram of Conceptual Framework

Figure 1 illustrates the conceptual framework explaining the relationships among FAST utilization, teachers' instructional performance, principals' leadership performance, and students' academic performance in Florida charter schools. FAST utilization is positioned as the independent variable and is operationalized through student performance monitoring, analysis of assessment results, and the use of assessment data for decision-making. These components represent how assessment data are generated, interpreted, and applied within schools to support instructional and managerial processes.

Teachers' instructional performance and principals' leadership performance are shown as mediating variables. The framework assumes that effective use of FAST data first influences leadership practices and instructional approaches. Principals are expected to use assessment data to guide school-level decisions, provide instructional leadership, and support teachers. Teachers, in turn, apply FAST results to adjust instruction, implement interventions, and address student learning needs. These mediating processes reflect evidence that assessment data affect student outcomes primarily through teaching and leadership actions rather than through direct mechanisms (Datnow & Park, 2019; Leithwood et al., 2020).

Students' academic performance is presented as the dependent variable and represents the final outcome of effective FAST utilization mediated by leadership and instructional practices. The directional arrows in the model indicate the hypothesized paths tested in the study, emphasizing both direct and indirect effects. Overall, the figure demonstrates that improved student achievement is expected when FAST data are systematically utilized, effectively interpreted, and translated into informed instructional and leadership decisions (Brookhart & DePascale, 2023; Grissom et al., 2021).

2. Review of Related Literature

Assessment systems have long been positioned as central mechanisms for improving student learning and ensuring accountability in education systems. Under standards-based reforms in the United States, formative and progress-monitoring assessments gained prominence because they provided timely information that supported instructional adjustment rather than delayed summative judgment (Black & Wiliam, 2018). Recent studies emphasized that assessments were most effective when they functioned as tools for learning improvement rather than as instruments of compliance alone (Brookhart & DePascale, 2023). Progress-monitoring systems, such as Florida's Assessment of Student Thinking (FAST), aligned with this perspective by generating frequent data on student learning trajectories. Evidence showed that when assessment data were systematically collected and

analyzed, they supported early identification of learning gaps and more responsive instructional practices, which were associated with improved academic performance (Schildkamp et al., 2020; Hamilton et al., 2020).

The use of assessment data for instructional decision-making has been widely examined in the literature on data-driven instruction. Research consistently showed that teachers' ability to interpret and apply assessment data influenced instructional quality and student outcomes (Datnow & Park, 2019). Teachers who engaged in collaborative data analysis and aligned instruction with assessment results demonstrated stronger differentiation practices and more targeted interventions (Brookhart & DePascale, 2023). However, several studies cautioned that data availability alone did not guarantee improvement. Without adequate data literacy and structured support, assessment data were often underutilized or reduced to superficial reporting (Schildkamp et al., 2020). This concern was particularly evident in charter school contexts, where accountability pressures were high but instructional capacity varied across schools (Berends et al., 2022).

School leadership has been identified as a critical factor that shaped how assessment data were used within schools. Effective principals fostered cultures of data use by setting clear expectations, providing professional development, and aligning assessment results with school improvement strategies (Leithwood et al., 2020). Empirical studies showed that leadership practices mediated the relationship between assessment systems and student achievement by influencing teacher motivation, instructional coherence, and resource allocation (Grissom et al., 2021). In charter schools, leadership effectiveness was especially salient because assessment outcomes were closely tied to school survival and renewal decisions (Dallavis & Berends, 2023). Despite this, limited empirical work had examined integrated models that simultaneously considered assessment utilization, instructional performance, and leadership effectiveness within newly implemented progress-monitoring systems such as FAST. This gap underscored the need for studies that examined how assessment data moved through leadership and instructional processes to influence student academic performance.

3. Methodology

The study adopted a quantitative approach using a descriptive–correlational research design to examine the utilization of the Florida Assessment of Student Thinking (FAST) and its contribution to students' academic performance through teachers' instructional performance and principals' leadership performance. The population consisted of teachers and school principals from 47 charter schools in Palm Beach County, Florida, and a complete enumeration sampling technique was applied, involving all principals and selected teachers from each school, with the school treated as the unit of analysis. Data were collected using a structured rubric-based survey to measure the extent of FAST utilization in terms of student performance monitoring, analysis of assessment results, and use of assessment data for decision-making, while secondary data were used to obtain students' academic performance, teachers' performance ratings, and principals' leadership performance from institutional records. Descriptive statistics such as mean, frequency, and percentage were used to describe the variables, while Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to examine direct and mediating relationships among FAST utilization, instructional performance, leadership performance, and students' academic outcomes, given their suitability for predictive modeling and complex variable relationships (Hair et al., 2021). Ethical considerations were strictly observed through prior approval from the institutional ethics committee and relevant authorities, informed consent from participants, voluntary participation, confidentiality of responses, and anonymization of data to protect the rights and welfare of all respondents (Creswell & Creswell, 2018).

4. Results and Discussion

Table 1. Extent of FAST Utilization among Florida Charter Schools (n = 47)

Dimension / Indicator	Mean	Standard Deviation	Interpretation
Student Performance Monitoring			
Percentage of students who completed all FAST administrations within the school year	3.95	0.84	Excellent
Comprehensive Analysis of Assessment Results			
Conduct of statistical analysis highlighting achieved and unmet competencies	3.95	0.85	Excellent
Development of comprehensive discussions and recommendations based on results	3.95	0.84	Excellent
Use of Assessment Results for Decision-Making			
Utilization of FAST results in developing instructional materials	3.98	0.82	Excellent
Use of FAST results as inputs for curriculum review and improvement	3.91	0.77	Excellent

The results in table 1 indicated that all dimensions of FAST utilization were rated at an excellent level. Student performance monitoring showed a high mean score, suggesting that the majority of schools consistently ensured full participation in FAST administrations. The comprehensive analysis of assessment results also received excellent ratings, indicating that schools actively engaged in statistical analysis and interpretation of FAST data. Similarly, the use of FAST results for decision-making demonstrated excellent utilization, reflecting strong integration of assessment findings into instructional planning and curriculum improvement. Although standard deviation values suggested some variability across schools, overall findings confirmed that FAST was extensively utilized as a core tool for monitoring, analysis, and decision-making within Florida charter schools.

Table 2. Distribution of Students According to Academic Performance (GPA) (n = 47 schools)

Category	Description	Frequency	Percentage (%)
A	Outstanding Progress	30	64
B	Above Average Progress	7	15
C	Average Progress	10	21
D	Lowest Acceptable Progress	0	0
Total		**47**	**100**

Table 2 shows that most charter schools reported outstanding student academic performance, with 64% of schools falling under the highest GPA category. No school reported students at the lowest acceptable level, indicating generally strong academic outcomes across the participating charter schools.

Table 3. Distribution of Students According to FAST Performance Levels (n = 47 schools)

Level	Description	Frequency	Percentage (%)
1	Well Below Grade Level	0	0
2	Below Grade Level	5	11
3	On Grade Level	30	64
4	Proficient	8	17
5	Exemplary	4	9
Total		**47**	**100**

As shown in table 3, the majority of schools (64%) reported students performing at grade level based on FAST, while a combined 26% demonstrated proficient to exemplary performance. Only a small proportion of schools showed students performing below grade level, reinforcing the overall positive academic standing observed in GPA results.

Table 4. Distribution of Teachers According to Performance Rating (n = 47 schools)

Category	Description	Frequency	Percentage (%)
B	Needs Improvement / Developing	0	0
C	Effective	10	21
D	Highly Effective	37	79
Total		**47**	**100**

The findings in table 4 indicated that teachers in most charter schools demonstrated highly effective performance, accounting for 79% of the schools. No school reported teachers under the "needs improvement" category, suggesting strong instructional capacity across the sample.

Table 5. Distribution of Principals According to Leadership Performance (n = 47 schools)

Category	Description	Frequency	Percentage (%)
B	Satisfactory	1	2
C	Very Satisfactory	8	17
D	Outstanding	38	81
Total		**47**	**100**

The results in table 5 showed that principals' leadership performance was predominantly outstanding, with 81% of schools reporting the highest leadership rating. Only one school reported a satisfactory leadership level, indicating generally strong leadership across Florida charter schools. Overall, the findings for Research Question 2 demonstrated that alongside high levels of FAST utilization, charter schools exhibited strong student academic performance, highly effective teachers, and outstanding school leadership. These results provided empirical support for examining the interrelationships among FAST utilization, instructional performance, leadership effectiveness, and student academic outcomes in subsequent analyses.

Table 6. Direct and Mediating Effects Based on the PLS-SEM Model

Hypothesized Path	Path Coefficient	p-value	Decision	Interpretation
FAST utilization → Analysis of assessment results	0.585	0.001	Reject H_o	Significant
Analysis of assessment results → Use of results for decision-making	0.794	0.001	Reject H_o	Significant
Use of assessment results → Principals' leadership performance	0.668	0.001	Reject H_o	Significant
Use of assessment results → Teachers' instructional performance	0.206	0.244	Accept H_o	Not significant
Principals' leadership performance → Teachers' instructional performance	0.513	0.001	Reject H_o	Significant
Principals' leadership performance → Students' academic performance	0.626	0.001	Reject H_o	Significant
Teachers' instructional performance → Students' academic performance	0.267	0.079	Reject H_o	Marginally significant
Use of assessment results → Principals' leadership → Students'	0.418	0.001	Reject H_o	Significant

Hypothesized Path	Path Coefficient	p-value	Decision	Interpretation
academic performance				mediation
Use of assessment results → Teachers → Students' academic performance	0.055	0.486	Accept H_o	No mediation
Principals' leadership → Teachers → Students' academic performance	0.137	0.047	Reject H_o	Significant mediation

Table 6 indicated that FAST utilization had a significant and positive direct effect on the analysis of assessment results, which in turn significantly influenced the use of assessment data for decision-making. The use of FAST results significantly affected principals' leadership performance but did not have a direct significant effect on teachers' instructional performance. Principals' leadership performance demonstrated a strong and significant direct effect on both teachers' performance and students' academic performance. Teachers' instructional performance showed a marginally significant direct effect on students' academic performance.

In terms of mediation, principals' leadership performance significantly mediated the relationship between the use of FAST assessment results and students' academic performance. Teachers' instructional performance did not significantly mediate the relationship between FAST utilization and student outcomes. However, teachers' performance significantly mediated the relationship between principals' leadership performance and students' academic performance.

Overall, the PLS-SEM model explained 68.1% of the variance in students' academic performance, indicating a strong predictive capacity. The findings demonstrated that FAST utilization influenced student achievement primarily through leadership-driven decision-making processes rather than through direct instructional effects alone.

Table 7. Measurement Model Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability (ρa)	Composite Reliability (ρc)	AVE
Comprehensive analysis of FAST results	0.712	0.746	0.854	0.747
Use of FAST results for decision-making	0.732	0.724	0.841	0.726
Students' academic performance	0.745	0.843	0.845	0.733

All constructs in table 7 demonstrated acceptable internal consistency, with Cronbach's alpha and composite reliability values exceeding the minimum threshold. Convergent validity was also established, as all AVE values were well above 0.50, indicating that each construct explained a substantial proportion of variance in its indicators. These results confirmed that the measurement model was reliable and suitable for structural analysis (Hair et al., 2021).

Table 8. Discriminant Validity Using HTMT Ratio

Constructs	Analysis of FAST	FAST Utilization	FAST for Decision-Making	School Leadership	Student Performance	Teacher Performance
FAST Utilization	0.687	—	—	—	—	—
FAST for Decision-Making	0.785	0.761	—	—	—	—
School Leadership	0.757	0.523	0.842	—	—	—
Student Performance	0.762	0.685	0.801	0.823	—	—
Teacher Performance	0.627	0.605	0.695	0.651	0.787	—

All HTMT values in table 8 were below the conservative threshold of 0.85, confirming satisfactory discriminant validity among the constructs. These findings indicated that each construct measured a distinct concept within the model and that overlap between constructs was within acceptable limits (Cheung et al., 2024).

Overall, the reliability and validity tests confirmed that the measurement model was robust. The constructs used in the study were reliable, distinct, and appropriate for explaining the structural relationships among FAST utilization, leadership performance, instructional performance, and students' academic outcomes.

Summary of Results

The results of the study demonstrated that the Florida Assessment of Student Thinking (FAST) was extensively utilized among Florida charter schools, particularly in student performance monitoring, analysis of assessment results, and data-driven decision-making, all of which were rated at an excellent level. Alongside this high level of utilization, students generally exhibited strong academic performance, with most schools reporting learners performing at or above grade level based on both GPA and FAST results. Teachers were predominantly rated as highly effective, and principals demonstrated outstanding leadership performance across the majority of schools.

The structural equation modeling results further revealed that FAST utilization significantly influenced assessment analysis and decision-making processes, which in turn strongly affected principals' leadership performance. Leadership emerged as a central mechanism through which FAST data contributed to improved student academic performance, while the direct influence of FAST on teachers' instructional performance was not statistically significant. Teachers' performance showed a marginal direct effect on student outcomes and served as a partial mediator between leadership and student achievement. Overall, the model explained a substantial proportion of variance in students' academic performance, confirming that the impact of FAST was largely realized through leadership-driven and instructional pathways rather than through direct assessment effects alone.

Discussion of Findings

The findings of the study indicated that the utilization of the Florida Assessment of Student Thinking (FAST) among Florida charter schools was consistently high, particularly in student performance monitoring, analysis of assessment results, and the use of data for decision-making. This result aligned with existing literature which emphasized that progress-monitoring assessment systems were most effective when they were embedded in routine school practices rather than treated as isolated compliance tools (Black & Wiliam, 2018; Schildkamp et al., 2020). The excellent level of FAST utilization observed suggested that charter schools had largely adapted to the accountability and instructional demands associated with progress monitoring, supporting the view that timely assessment data enhanced responsiveness to student learning needs (Brookhart & DePascale, 2023).

The strong academic performance of students, alongside highly effective teachers and outstanding school leadership, reinforced the argument that assessment systems yielded meaningful outcomes when supported by leadership capacity and instructional coherence. The PLS-SEM results highlighted that FAST influenced student academic performance primarily through principals' leadership performance rather than through direct instructional pathways. This finding was consistent with prior research which identified school leadership as a key mediator in translating assessment data into actionable school improvement strategies (Leithwood et al., 2020; Grissom et al., 2021). Principals who effectively used FAST data appeared to guide instructional focus, allocate resources strategically, and sustain a culture of data-informed practice, thereby amplifying the impact of assessment on student outcomes.

Although teachers' instructional performance demonstrated only a marginal direct effect on students' academic performance, its mediating role between leadership and student outcomes remained significant. This suggested that teachers' effectiveness was influenced by leadership-driven structures and expectations surrounding data use. Similar findings were reported in studies indicating that teachers' capacity to act on assessment data depended heavily on leadership support, professional development, and collaborative data practices (Datnow & Park, 2019; Dallavis & Berends, 2023). Overall, the discussion underscored that FAST functioned most effectively as a systemic tool when assessment data flowed through leadership and instructional processes, affirming the importance of integrated data use models in charter school settings (Brookhart & DePascale, 2023).

5. Conclusion and Recommendations

Conclusion

The study concluded that the Florida Assessment of Student Thinking (FAST) was effectively utilized across Florida charter schools as a core mechanism for monitoring student performance, analyzing learning outcomes, and guiding decision-making processes. The high level of FAST utilization reflected the successful integration of progress-monitoring assessments into instructional and leadership practices. Students generally demonstrated strong academic performance, while teachers and principals exhibited high levels of instructional and leadership effectiveness, suggesting a positive school environment supported by data-informed practices. The structural model confirmed that FAST influenced students' academic performance primarily through principals' leadership performance, with leadership serving as the key pathway through which assessment data were translated into instructional focus and school improvement actions. Teachers' instructional performance contributed to student outcomes mainly when supported by strong leadership, reinforcing the importance of coherent leadership–instructional alignment. Overall, the findings emphasized that the value of FAST lay not in assessment administration alone but in the strategic use of its results within leadership and instructional systems.

Recommendations

Based on the conclusions, it was recommended that school leaders further strengthen data-driven leadership practices by institutionalizing regular data review processes and aligning FAST results with instructional planning and school improvement initiatives. Continuous professional development should be provided to teachers to enhance data literacy and support effective interpretation and application of FAST results in classroom instruction. The Florida Department of Education may consider refining FAST reporting systems to ensure timely, accessible, and actionable feedback for schools while supporting targeted interventions for schools with lower levels of assessment utilization. Future research was recommended to examine the long-term effects of FAST on student achievement through longitudinal designs and to explore qualitative perspectives of teachers and school leaders to deepen understanding of assessment use in diverse charter school contexts.

6. Limitations of the Study and Directions for Future Research

The study was limited to charter schools in Palm Beach County, Florida, and therefore the findings may not be generalized to traditional public schools or charter schools operating under different accountability and assessment frameworks. The study relied primarily on quantitative data and school-level aggregates, which may not have fully captured variations in individual teacher practices, classroom contexts, or student experiences. The use of self-reported and institutional performance data also introduced the possibility of reporting bias. In addition, the cross-sectional design limited the ability to examine changes in FAST utilization and performance outcomes over time.

Future research may address these limitations by employing longitudinal designs to examine the sustained impact of FAST on student achievement and school improvement. Qualitative approaches, such as interviews and classroom observations, may be used to explore how teachers and principals interpret and act on FAST data in daily practice. Comparative studies involving traditional public schools and charter schools across multiple districts or states may also be conducted to strengthen generalizability. Further research may also examine contextual factors, such as professional development quality, school culture, and resource availability, that shape the effectiveness of assessment-driven decision-making.

References

Berends, M., Bodilly, S., & Kirby, S. (2022). *Facing the challenges of whole-school reform: New American schools after a decade*. RAND Corporation.

Black, P., & Wiliam, D. (2018). Classroom assessment and pedagogy. *Assessment in Education: Principles, Policy & Practice, 25*(6), 551–575. https://doi.org/10.1080/0969594X.2018.1441807

Brookhart, S. M., & DePascale, C. (2023). *Assessment to inform teaching and learning*. Routledge.

Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling. *Organizational Research Methods, 27*(1), 161–194. https://doi.org/10.1177/10944281221146859

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.

Dallavis, C., & Berends, M. (2023). Instructional coherence and data use in charter schools. *Educational Administration Quarterly, 59*(3), 389–425. https://doi.org/10.1177/0013161X221145189

Datnow, A., & Park, V. (2019). *Data-driven leadership*. Jossey-Bass.

Florida Department of Education. (2023). *Florida assessment of student thinking (FAST): Program overview*. Florida Department of Education.

Grissom, J. A., Egalite, A. J., & Lindsay, C. A. (2021). *How principals affect students and schools*. Wallace Foundation.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.

Hamilton, L. S., Halverson, R., Jackson, S. S., Mandinach, E. B., Supovitz, J. A., & Wayman, J. C. (2020). *Using student achievement data to support instructional decision making* (NCEE 2020-4007). U.S. Department of Education.

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). Berrett-Koehler.

Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management, 40*(1), 5–22. https://doi.org/10.1080/13632434.2019.1596077

Schildkamp, K., Poortman, C. L., Luyten, H., & Ebbeler, J. (2020). Factors promoting and hindering data-based decision making in schools. *School Effectiveness and School Improvement, 31*(3), 421–444. https://doi.org/10.1080/09243453.2019.1616653

U.S. Department of Education. (2018). *Every Student Succeeds Act (ESSA): State and local implementation*. U.S. Department of Education.