ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 9 (September 2026)

Instructional Recovery Mapping and Learner Support Agility in Public Elementary Classrooms

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Date Submitted:
March 12, 2026

Date Accepted:
July 28, 2026

Date Published:
September 24, 2026

DOI:
10.5281/zenodo.22922922

ABSTRACT

This study focused on how instructional recovery mapping shaped learner support agility among public elementary school teachers in Solana, Cagayan. Using a predictive explanatory survey design, data were gathered from 85 teachers selected through proportionate stratified random sampling. The 32-item Instructional Recovery Mapping and Learner Support Agility Scale demonstrated strong internal consistency, with Cronbach's alpha coefficients of .92 for instructional recovery mapping and .94 for learner support agility. Descriptive statistics, Pearson correlation, bootstrapped multiple regression, and relative weight analysis were employed. Results showed high levels of instructional recovery mapping and learner support agility, although intervention matching, support coordination, and resource flexibility emerged as comparatively weaker areas. Instructional recovery mapping significantly predicted learner support agility and explained 59.0% of its variance. Among the recovery dimensions, intervention matching was the strongest predictor, followed by progress tracking, learning-gap diagnosis, and competency prioritization. The findings indicate that effective recovery depends not only on identifying learning deficiencies but also on aligning interventions with diagnosed needs and continuously monitoring learner progress. Strengthening intervention matching, support coordination, and access to adaptable instructional resources is therefore recommended to improve responsive learner assistance in public elementary classrooms.

Keywords: *competency prioritization, instructional recovery mapping, intervention matching, learner support agility, learning-gap diagnosis, progress tracking*

INTRODUCTION

Elementary classrooms bring together learners whose mastery of foundational skills often differs widely, even when they are enrolled at the same grade level. These differences require teachers to look beyond coverage of prescribed competencies and determine what learners have mastered, where learning has stalled, and what type of support is needed to move them forward. The continuing challenge is evident in the Philippine education system, where PISA 2022 results showed that only 16% of Filipino learners reached at least Level 2 proficiency in mathematics, 24% in reading, and 23% in science (Organisation for Economic Co-operation and Development [OECD], 2023). Although these results involve 15-year-old learners, they point to difficulties in foundational learning that develop across earlier stages of schooling.

Learning recovery therefore depends not only on providing additional instruction but also on identifying learning gaps with enough precision to guide classroom decisions. Global guidance on learning recovery emphasizes regular assessment of learners' actual proficiency, prioritization of fundamental skills, and instruction matched to current learning levels rather than assumptions based solely on grade placement (World Bank et al.,

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International Journal
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2022). Such practices support the idea of instructional recovery mapping, where teachers systematically identify areas of mastery, unfinished learning, priority competencies, and appropriate intervention points before deciding how recovery instruction should proceed.

Assessment becomes valuable when its results lead to timely instructional action. A meta-analysis involving 118 K to 12 studies found that formative assessment produced a positive effect on academic achievement, reinforcing the importance of using evidence of learning to modify instruction while learning is still taking place (Yao et al., 2024). Teachers, however, must do more than recognize gaps. They must also adjust tasks, pacing, grouping, explanations, feedback, and learning support as learner needs change. Research on adaptive instruction similarly stresses that sound instructional decisions depend on teachers' capacity to gather and interpret information about learner needs and progress while responding flexibly to classroom conditions (Kärner et al., 2021).

This responsibility has become an explicit priority in Philippine basic education. The Department of Education institutionalized the National Learning Recovery Program to address learning gaps, strengthen literacy and numeracy, and accelerate progress toward basic education targets (Department of Education [DepEd], 2023). Within this direction, learner support agility may be understood as the teacher's capacity to respond promptly and appropriately to identified learning needs by modifying support, resources, instructional strategies, and intervention arrangements. Yet the relationship between teachers' practices in mapping learning recovery needs and their agility in providing learner support remains insufficiently examined at the classroom level. Thus, this study investigates instructional recovery mapping and learner support agility among public elementary school teachers in Solana, Cagayan, with the aim of generating evidence that may strengthen responsive and targeted support for learners who require different pathways toward mastery.

Literature Review

Instructional Recovery Mapping

Effective learning recovery begins with a clear picture of what learners know, what they have not yet mastered, and which competencies require immediate attention. Data-based decision making allows teachers to organize assessment results and other classroom evidence into information that can guide instructional priorities. In primary education, Gelderblom et al. (2016) found that teachers commonly use learner data to inform instruction, although the quality of instructional improvement depends on how thoroughly teachers analyze and translate those data into action. Mandinach and Gummer (2016) similarly emphasized that teachers need data literacy to move from collecting information to making sound instructional decisions. These ideas support instructional recovery mapping as a deliberate process of locating learning gaps, identifying priority needs, and connecting those needs with suitable teaching responses.

Assessment Evidence and Learning Gap Identification

Assessment plays a central role in identifying where recovery efforts should begin and whether instructional support is producing the intended progress. Rather than treating assessment solely as a measure of completed learning, teachers can use evidence from classroom tasks, observation, questioning, and learner performance to determine current needs and adjust subsequent instruction. Schildkamp et al. (2020) identified assessment literacy, data literacy, pedagogical content knowledge, and teacher collaboration as important conditions for effective formative assessment. Schellekens et al. (2021) further showed that assessment becomes more useful when information is continuously gathered and acted upon to determine where learners are, where they need to go, and what support can help bridge the gap. Recovery mapping therefore gains value when assessment evidence leads directly to instructional choices.

Adaptive and Differentiated Instruction

ISSN: 3116-3475
International Journal
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Identifying a learning difficulty does not by itself improve learner performance. Teachers must be able to modify instruction according to the needs revealed by classroom evidence. Parsons et al. (2018) described instructional adaptation as an important feature of effective teaching, particularly when teachers adjust their practices according to learners' academic, linguistic, social, and instructional needs. Differentiation likewise requires teachers to make deliberate decisions about content, learning activities, grouping, pacing, and support rather than applying the same response to every learner. Van Geel et al. (2019) showed that differentiated instruction is a complex professional skill requiring both teacher knowledge and careful interpretation of learner differences. These perspectives provide a strong basis for learner support agility, where teachers respond flexibly as learner needs and progress change.

Tiered Learner Support and Support Agility

Learner needs vary in severity, which makes a single form of intervention insufficient for all pupils. Some learners may progress through adjustments in regular classroom instruction, while others require small-group intervention, closer monitoring, or individualized assistance. Multi-tiered systems of support offer a useful structure for organizing these varying levels of intervention through evidence-based decisions and continuing assessment. In their systematic review of elementary education, Nitz et al. (2023) found that multi-tiered approaches combine diagnostic information with progressively targeted forms of support and stressed the importance of coordination among teachers and other school personnel. This tiered perspective strengthens the concept of learner support agility because responsiveness involves not only changing teaching strategies but also determining the intensity, timing, and form of assistance that each learner requires.

METHODS

Research Design

The study used a predictive explanatory survey design to determine how instructional recovery mapping was associated with and contributed to learner support agility among public elementary school teachers. The design allowed the two constructs to be measured as they occurred in actual classroom practice while also examining which dimensions of instructional recovery mapping carried greater predictive importance for responsive learner support. No respondent profile variables were included because the analysis focused directly on instructional practices and support responsiveness.

Research Locale

The study was conducted in public elementary schools in Solana, Cagayan. The municipality offered a suitable setting because its elementary classrooms served learners with differing levels of mastery and learning support needs. Data collection covered teachers from the recognized elementary education areas of the municipality to prevent the findings from being concentrated in one locality or school.

Participants and Sampling Technique

The study involved 85 public elementary school teachers who had regular classroom teaching assignments during the conduct of the research. The sample size was established through an a priori power analysis for multiple regression with four predictors, using a medium effect size of ($f^2 = .15$), a significance level of .05, and statistical power of .80. The resulting minimum sample requirement was 85 teachers. Proportionate stratified random sampling was used so that teachers from the different elementary education areas of Solana were represented according to their share in the official teacher sampling frame. Random selection was subsequently carried out within each stratum. School administrators without regular classroom teaching assignments were excluded.

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Research Instrument

Data were gathered using the researcher-developed Instructional Recovery Mapping and Learner Support Agility Scale (IRMLSAS). The instrument consisted of 32 statements equally divided between two major constructs. Sixteen items measured instructional recovery mapping across learning-gap diagnosis, competency prioritization, progress tracking, and intervention matching, while another 16 items measured learner support agility in terms of response timeliness, instructional adaptation, support coordination, and resource flexibility. Each dimension contained four statements rated on a five-point scale.

The instrument underwent expert validation by five specialists in elementary education, instructional supervision, educational assessment, and research methodology. The validation yielded an S-CVI/Ave of .96, indicating excellent content validity. Suggestions from the validators were incorporated to improve item clarity, relevance, and alignment with the intended constructs. The revised instrument was then pilot tested with 30 public elementary school teachers who were not included in the actual study.

Reliability testing showed strong internal consistency. Cronbach's alpha was .92 for Instructional Recovery Mapping and .94 for Learner Support Agility, while the overall Cronbach's alpha for the complete 32-item instrument was .95. The dimension coefficients were .88 for learning-gap diagnosis, .86 for competency prioritization, .89 for progress tracking, .87 for intervention matching, .90 for response timeliness, .88 for instructional adaptation, .86 for support coordination, and .89 for resource flexibility. These results confirmed that the IRMLSAS had strong content validity and reliability and was appropriate for use in the main data collection.

Data Gathering

Permission to conduct the study was obtained from the appropriate education authorities before data collection. Eligible teachers were identified from the official sampling frame and selected according to the prescribed sampling procedure. The purpose of the research, instructions for completing the questionnaire, and participant rights were explained before administration. Completed questionnaires were retrieved, reviewed for completeness, coded, and entered into the statistical dataset. Responses were screened before the final analysis to identify missing entries and coding errors.

Data Analysis

Mean and standard deviation were used to determine the levels of instructional recovery mapping and learner support agility. Pearson correlation analysis was initially performed to establish the direction and strength of relationships among the study dimensions. To determine the predictive contribution of instructional recovery mapping to learner support agility, bootstrapped multiple regression with 5,000 resamples was applied. Standardized regression coefficients, confidence intervals, explained variance, and statistical significance were reported. Relative weight analysis was subsequently used to determine how much each instructional recovery mapping dimension contributed to the total explained variance in learner support agility. This procedure allowed the predictors to be ranked according to their practical contribution even when the dimensions shared overlapping variance. Statistical decisions were evaluated at the .05 level of significance.

Ethical Consideration

Participation was voluntary and proceeded only after informed consent was obtained. Respondents were informed of the purpose of the study, their right to decline or withdraw, and the confidentiality of their responses. Names, school identifiers, and information that could identify individual participants were excluded from the analytical dataset. Research records were secured and used solely for the purposes stated in the study.

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RESULTS AND DISCUSSION

Table 1. *Level of Instructional Recovery Mapping among Public Elementary School Teachers*

Dimension	Mean	SD	Interpretation	Rank
Learning-gap diagnosis	4.12	0.49	High	1
Competency prioritization	3.88	0.54	High	2
Progress tracking	3.71	0.58	High	3
Intervention matching	3.49	0.63	High	4
Overall	3.80	0.48	High	

Scale: 4.21 to 5.00 = Very High; 3.41 to 4.20 = High; 2.61 to 3.40 = Moderate; 1.81 to 2.60 = Low; 1.00 to 1.80 = Very Low.

Table 1 shows that instructional recovery mapping was generally practiced at a high level, with an overall mean of 3.80. Learning-gap diagnosis obtained the highest mean of 4.12, indicating that teachers were particularly capable of identifying competencies and skills that learners had not fully mastered. This suggests that classroom assessment, observation, and learner outputs provided teachers with a reasonably clear basis for locating learning difficulties.

Competency prioritization also received a high rating at 3.88, showing that teachers were able to determine which learning gaps required immediate instructional attention. Progress tracking followed with a mean of 3.71. Although still high, the lower score suggests that systematic documentation of learner movement after intervention was less consistent than the initial identification of learning gaps.

Intervention matching recorded the lowest mean of 3.49. The result points to a practical concern in the recovery process. Teachers appeared more confident in identifying what learners lacked than in selecting or designing interventions that closely corresponded to specific learning deficiencies. Thus, instructional recovery mapping was evident, but the transition from diagnosis to precisely matched intervention remained an area requiring improvement.

Table 2. *Level of Learner Support Agility among Public Elementary School Teachers*

Dimension	Mean	SD	Interpretation	Rank
Response timeliness	3.84	0.55	High	1
Instructional adaptation	3.76	0.57	High	2
Support coordination	3.43	0.65	High	3
Resource flexibility	3.28	0.68	Moderate	4
Overall	3.58	0.51	High	

Table 2 indicates that learner support agility reached an overall mean of 3.58, interpreted as high. Response timeliness ranked first with a mean of 3.84, indicating that teachers generally responded promptly when learning difficulties became apparent. Instructional adaptation also obtained a high mean of 3.76, suggesting that teachers modified explanations, activities, pacing, or classroom arrangements when learners required additional assistance.

Support coordination received a considerably lower mean of 3.43. Although still within the high range, the result suggests uneven coordination of learner assistance with colleagues, families, or other available support mechanisms. The lowest dimension was resource flexibility, with a mean of 3.28 and a moderate interpretation. This finding shows that teachers experienced greater difficulty adjusting or obtaining learning materials, intervention resources, and other forms of support according to changing learner needs.

The results reveal an important distinction between willingness to respond and capacity to mobilize support. Teachers appeared able to act quickly and adjust classroom instruction, but their responsiveness became

ISSN: 3116-3475
International Journal
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more constrained when effective support depended on flexible resources or coordination beyond their immediate classroom practices.

Table 3. *Correlations Between the Dimensions of Instructional Recovery Mapping and Learner Support Agility*

Instructional Recovery Mapping Dimension	Response Timeliness	Instructional Adaptation	Support Coordination	Resource Flexibility	Overall Learner Support Agility
Learning-gap diagnosis	.61**	.58**	.46**	.40**	.57**
Competency prioritization	.49**	.55**	.44**	.38**	.52**
Progress tracking	.57**	.63**	.52**	.48**	.62**
Intervention matching	.60**	.66**	.59**	.55**	.68**

**$p < .001$.

All dimensions of instructional recovery mapping were positively and significantly associated with learner support agility. Correlations with overall learner support agility ranged from .52 to .68, indicating moderate to strong relationships. The strongest relationship emerged between intervention matching and learner support agility, $r = .68$, $p < .001$. Teachers who more effectively connected diagnosed learning needs with appropriate interventions therefore tended to demonstrate greater flexibility and responsiveness in supporting learners.

Progress tracking also showed a substantial association with learner support agility, $r = .62$, $p < .001$. This suggests that teachers who closely monitored learner progress were better positioned to determine whether support should be continued, intensified, modified, or discontinued.

Learning-gap diagnosis was significantly related to overall learner support agility, $r = .57$, while competency prioritization showed a correlation of .52. These findings indicate that identifying and organizing learning needs contributed to responsive support, but their influence was stronger when teachers moved beyond diagnosis toward monitoring and intervention matching.

Resource flexibility consistently produced the weakest correlations with the recovery-mapping dimensions, ranging from .38 to .55. This pattern reinforces the earlier finding that access to adaptable instructional resources remained one of the more difficult aspects of learner support.

Table 4. *Bootstrapped Multiple Regression Predicting Learner Support Agility*

Predictor	B	SE	β	t	p	95% Bootstrap CI	VIF
Learning-gap diagnosis	.16	.07	.20	2.29	.025	[.03, .29]	1.42
Competency prioritization	.13	.06	.16	2.04	.045	[.01, .26]	1.38
Progress tracking	.22	.07	.28	3.08	.003	[.08, .36]	1.57
Intervention matching	.27	.06	.35	4.31	<.001	[.15, .39]	1.63

Model Statistic	Value
R	.768
R^2	.590
Adjusted R^2	.570
F (4, 80)	28.78
p	<.001
Bootstrap resamples	5,000

The regression model was statistically significant, $F(4, 80) = 28.78$, $p < .001$, and explained 59.0% of the variance in learner support agility. The adjusted coefficient of determination remained substantial at .570, indicating that the predictive capacity of the model was not dependent on unnecessary predictors.

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International Journal
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All four dimensions significantly predicted learner support agility. Intervention matching emerged as the strongest predictor, β = .35, $p < .001$. Holding the other recovery dimensions constant, greater capacity to match interventions with identified learner needs corresponded with greater teacher agility in providing support. Progress tracking was the second strongest predictor, β = .28, $p = .003$. The finding indicates that responsive learner support depended considerably on teachers knowing whether learners were actually improving after intervention.

Learning-gap diagnosis also contributed significantly, β = .20, $p = .025$, while competency prioritization had a smaller but significant contribution, β = .16, $p = .045$. The variance inflation factors ranged from 1.38 to 1.63, indicating that problematic overlap among predictors was not evident.

The result strengthens the central premise of the study. Learner support agility was not simply associated with recognizing learner difficulties. It was more strongly connected with what teachers did after those difficulties had been identified, particularly their capacity to match interventions and continually monitor whether those interventions were working.

Table 5. *Relative Weight Analysis of Predictors of Learner Support Agility*

Predictor	Raw Relative Weight	Share of Explained Variance (%)	Importance Rank
Intervention matching	.231	39.15	1
Progress tracking	.167	28.31	2
Learning-gap diagnosis	.106	17.97	3
Competency prioritization	.086	14.58	4
Total explained variance	.590	100.00	

Relative weight analysis provided a clearer account of how the four recovery-mapping dimensions contributed to the 59.0% explained variance in learner support agility. Intervention matching accounted for the largest proportion at 39.15%, followed by progress tracking at 28.31%. Together, these two dimensions accounted for more than two thirds of the variance explained by the model.

Learning-gap diagnosis contributed 17.97%, while competency prioritization accounted for 14.58%. Although both remained important, their relative contributions were lower than those of intervention matching and progress tracking. The result suggests that diagnostic information becomes more consequential when it is translated into an appropriate intervention and followed by continued monitoring.

A particularly important finding emerged when the relative importance results were considered alongside the descriptive statistics. Intervention matching was the lowest-rated dimension of instructional recovery mapping at 3.49, yet it was the most influential predictor of learner support agility. This gap between performance and predictive importance identifies intervention matching as the clearest priority for improvement. Strengthening teachers' ability to select, modify, and align recovery activities with specific learning deficiencies could therefore produce greater gains in learner support agility than concentrating only on practices that teachers were already performing relatively well.

Table 6. *Summary of Priority Findings Across the Study Variables*

Area	Descriptive Result	Predictive Evidence	Implication
Learning-gap diagnosis	Highest recovery-mapping mean, M = 4.12	β = .20, p = .025	Teachers identified learner difficulties effectively
Competency prioritization	High, M = 3.88	β = .16, p = .045	Prioritization supported agility but had the smallest relative contribution
Progress tracking	High, M = 3.71	β = .28, p = .003	Continued monitoring was important for adjusting learner support
Intervention matching	Lowest recovery-mapping mean, M = 3.49	Strongest predictor, β = .35, p < .001	Primary area for instructional improvement

ISSN: 3116-3475
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Response timeliness	Highest agility means, M = 3.84	Positively related to all recovery dimensions	Teachers generally acted promptly when needs emerged
Instructional adaptation	High, M = 3.76	Strong correlations with progress tracking and intervention matching	Teachers adjusted classroom instruction reasonably well
Support coordination	High but comparatively low, M = 3.43	Weaker than direct instructional responses	Coordination mechanisms needed strengthening
Resource flexibility	Moderate, M = 3.28	Weakest set of cross-variable correlations	Availability and adaptability of support resources remained a constraint

Taken together, the findings showed that instructional recovery mapping and learner support agility were closely connected but unevenly developed. Teachers demonstrated strength in recognizing learning gaps and responding quickly once difficulties appeared. The more persistent problem occurred in converting diagnostic information into precisely matched interventions and maintaining flexible resources and coordinated support.

The most consequential result was the position of intervention matching. It ranked lowest among the instructional recovery mapping dimensions but emerged as the strongest predictor and largest contributor to learner support agility. This indicates that the primary challenge was not the absence of diagnostic information. Rather, the weakness appeared in the movement from knowing the problem to selecting and sustaining the most appropriate instructional response.

The findings therefore suggest that instructional recovery becomes more effective when mapping functions as a continuing cycle of diagnosis, prioritization, intervention, monitoring, and adjustment. Learner support agility was strongest where teachers could move efficiently through this cycle. Where intervention options, resources, or coordination were limited, responsiveness also weakened. These results provide a clear basis for strengthening classroom-level recovery systems in public elementary education.

CONCLUSION

Instructional recovery mapping was strongly associated with learner support agility among public elementary school teachers in Solana, Cagayan. Teachers demonstrated stronger practices in identifying learning gaps and responding promptly to learner difficulties, but weaker performance was observed in intervention matching, support coordination, and resource flexibility. Intervention matching emerged as the strongest predictor of learner support agility, indicating that the effectiveness of recovery efforts depended not only on recognizing learning deficiencies but on selecting support that directly addressed identified needs. Progress tracking also contributed substantially, showing the importance of monitoring learner improvement and adjusting assistance when necessary. It is therefore recommended that schools strengthen teacher capacity in designing and matching interventions to specific learning gaps, establish more systematic procedures for monitoring learner progress, improve coordination among teachers and families, and expand access to flexible instructional resources. Professional development activities should give greater attention to translating assessment evidence into targeted intervention plans so that learning recovery becomes more responsive, timely, and appropriate to varying learner needs.

References

Department of Education. (2023). *Adoption of the National Learning Recovery Program in the Department of Education* (DepEd Order No. 013, s. 2023).

Gelderblom, G., Schildkamp, K., Pieters, J. M., & Ehren, M. C. M. (2016). Data-based decision making for instructional improvement in primary education. *International Journal of Educational Research, 80*, 1–14.

Kärner, T., Warwas, J., & Schumann, S. (2021). A learning analytics approach to address heterogeneity in the classroom: The teachers' diagnostic support system. *Technology, Knowledge and Learning, 26*, 31–52.

Mandinach, E. B., & Gummer, E. S. (2016). Every teacher should succeed with data literacy. *Phi Delta Kappan, 97*(8), 43–46.

Nitz, J., Brack, F., Hertel, S., Krull, J., Stephan, H., Hennemann, T., & Hanisch, C. (2023). Multi-tiered systems of support with focus on behavioral modification in elementary schools: A systematic review. *Heliyon, 9*(6), e17506.

Organisation for Economic Co-operation and Development. (2023). *PISA 2022 results, Volumes I and II: Country note, Philippines*. OECD Publishing.

Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parsons, A. W., Davis, S. G., Pierczynski, M., & Allen, M. (2018). Teachers' instructional adaptations: A research synthesis. *Review of Educational Research, 88*(2), 205–242.

Schellekens, L. H., Bok, H. G. J., de Jong, L. H., van der Schaaf, M. F., Kremer, W. D. J., & van der Vleuten, C. P. M. (2021). A scoping review on the notions of Assessment as Learning (AaL), Assessment for Learning (AfL), and Assessment of Learning (AoL). *Studies in Educational Evaluation, 71*, 101094.

Schildkamp, K., van der Kleij, F. M., Heitink, M. C., Kippers, W. B., & Veldkamp, B. P. (2020). Formative assessment: A systematic review of critical teacher prerequisites for classroom practice. *International Journal of Educational Research, 103*, 101602.

van Geel, M., Keuning, T., Frèrejean, J., Dolmans, D., van Merriënboer, J. J. G., & Visscher, A. J. (2019). Capturing the complexity of differentiated instruction. *School Effectiveness and School Improvement, 30*(1), 51–67.

World Bank, UNESCO, UNICEF, FCDO, USAID, & Bill & Melinda Gates Foundation. (2022). *The state of global learning poverty: 2022 update*. World Bank.

Yao, Y., Amos, M., Snider, K., & Brown, T. (2024). The impact of formative assessment on K-12 learning: A meta-analysis. *Educational Research and Evaluation, 29*(7–8), 452–475.