

Evaluation of DIBELS Assessment in the Literacy Development of Kindergarteners of Dagat-Dagatan Elementary School

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ABSTRACT

Background: Early literacy assessment is essential for identifying kindergarten learners who may be at risk for reading difficulties. Objective: This study evaluated the effectiveness of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment in supporting the literacy development of kindergarteners at Dagat-Dagatan Elementary School. Methods: A mixed-methods design was used. Quantitative data were drawn from DIBELS pre- and post-assessment results involving 150 kindergarteners, while qualitative data were gathered from 10 kindergarten teachers and 20 parents through interviews, focus-group discussions, and feedback questionnaires. Descriptive statistics and paired t-tests were used to analyze literacy gains, while thematic analysis was used to interpret

stakeholder perceptions. Results: The baseline results showed varied literacy levels across phonemic awareness, alphabetic principle, accuracy, and fluency. Post-assessment results showed statistically significant improvement in all four domains, with p-values below 0.001. Teachers reported that DIBELS supported data-driven instruction and early intervention, while parents observed improved engagement in home reading activities. Challenges included time constraints, the need for additional teacher training, and requests for more regular parent updates. Conclusion: DIBELS is an effective early literacy assessment and monitoring tool for kindergarten learners when supported by teacher training, sufficient implementation time, and parent-school communication.

Keywords: *DIBELS, early literacy assessment, educational evaluation, kindergarteners, literacy development*

INTRODUCTION

The ability to read proficiently by the end of primary grades is an important educational milestone because early reading competence predicts later academic success and lifelong learning opportunities. Kindergarten literacy development is especially important because children begin to acquire phonemic awareness, alphabet knowledge, print awareness, and early fluency skills that support later formal reading.

Dagat-Dagatan Elementary School serves learners in an urban educational setting where diverse socioeconomic conditions, varying levels of parental involvement, and uneven access to early childhood literacy resources may affect kindergarten literacy development. In contexts such as this, teachers need reliable and efficient assessment tools that can identify learners at risk for reading difficulties and provide actionable data for instruction. The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment is designed to measure key components of early literacy, including phonemic awareness, alphabetic principle, accuracy, and fluency. Its brief, repeated, and standardized format allows teachers to monitor progress and adjust instruction throughout the

academic year. Although DIBELS is widely used, its effectiveness in varied local contexts still requires practical evaluation.

This study therefore evaluated the effectiveness of DIBELS in the literacy development of kindergarteners at Dagat-Dagatan Elementary School. Specifically, it examined how effectively DIBELS identifies early literacy deficits, the extent to which regular administration contributes to improvement in literacy skills, and the recommendations that can enhance DIBELS implementation and literacy instruction.

METHODS

Research Design

The study employed a mixed-methods research design to evaluate the effectiveness of DIBELS in promoting kindergarten literacy development. The quantitative component analyzed DIBELS pre- and post-assessment scores, while the qualitative component examined the experiences and perceptions of teachers and parents regarding the assessment implementation, benefits, and challenges.

Locale and Respondents

The study was conducted at Dagat-Dagatan Elementary School, an urban school setting with a diverse student population and varying socioeconomic backgrounds. The respondents included 150 kindergarten learners randomly selected from five Dagat-Dagatan Elementary School groups or sections. Ten kindergarten teachers and 20 parents of participating learners were also included to provide implementation-related insights.

Research Instruments

The primary quantitative instrument was the DIBELS assessment, which measured phonemic awareness, alphabetic principle, accuracy, and fluency. The qualitative instruments included semi-structured interview guides, focus-group prompts, and feedback on questionnaires for teachers and parents. These instruments gathered information on the practical use of DIBELS, observed literacy changes, implementation challenges, and suggested improvements.

Data-Gathering Procedure

The study began with informed consent from parents, guardians, and teachers. DIBELS pre-assessments were administered at the beginning of the academic year to establish baseline literacy levels. Regular assessment intervals were then used to monitor learner progress. At the end of the academic year, post-assessments were administered and compared with baseline results. To complement the quantitative data, teachers and parents participated in interviews, focus groups, and feedback questionnaires.

Data Analysis

Descriptive statistics were used to summarize baseline DIBELS scores. Paired t-tests were used to compare pre- and post-assessment scores across the four literacy domains. Qualitative responses were analyzed through thematic analysis to identify recurring ideas related to data-driven instruction, early intervention, parental engagement, time constraints, training needs, and communication. Quantitative and qualitative results were integrated to produce a comprehensive interpretation of DIBELS effectiveness.

RESULTS

DIBELS Pre-Assessment Scores

The DIBELS pre-assessment established the baseline literacy profile of the kindergarten learners. The descriptive statistics showed a range of competencies across phonemic awareness, alphabetic principle, accuracy, and fluency, indicating the need for targeted literacy support.

Table 1. *Descriptive Statistics of DIBELS Pre-Assessment Scores*

Literacy Domain	Mean Score	Median Score	Standard Deviation	Range
Phonemic Awareness	14.3	15	3.2	8-20
Alphabetic Principle	12.5	13	4.1	5-19
Accuracy	10.7	11	2.9	6-15
Fluency	8.9	9	3.4	4-14

The baseline means scores suggest that learners performed highest in phonemic awareness and lowest in fluency. This pattern indicates that while many learners had developing awareness of sounds and letters, they needed greater support in fluent reading-related behaviors.

DIBELS Pre- and Post-Assessment Comparison

Paired t-tests were conducted to determine whether learners showed significant improvement after regular DIBELS monitoring and literacy instruction. Results showed significant gains across all assessed domains.

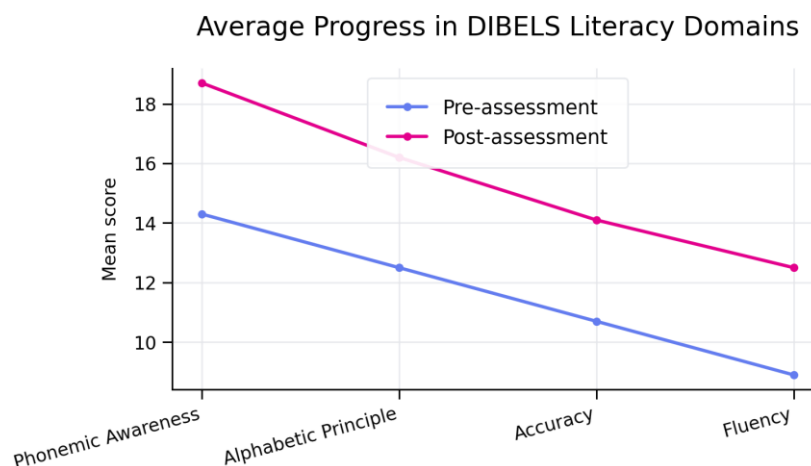
Table 2. *Paired t-Test Results for DIBELS Pre- and Post-Assessment Scores*

Literacy Domain	Mean Pre-Assessment Score	Mean Post-Assessment Score	t-Value	p-Value
Phonemic Awareness	14.3	18.7	6.54	<0.001**
Alphabetic Principle	12.5	16.2	5.97	<0.001**
Accuracy	10.7	14.1	5.11	<0.001**
Fluency	8.9	12.5	5.65	<0.001**

Note. $p < 0.001$ indicates statistical significance.

The findings show that DIBELS-supported monitoring and instruction were associated with measurable literacy gains. The largest mean increase appeared in phonemic awareness, while fluency also improved substantially from a lower starting point.

Figure 1. Average progress in DIBELS literacy domains over the academic year.



Teacher and Parent Perceptions

Qualitative results from teacher interviews, parent interviews, focus groups, and feedback questionnaires supported the quantitative results. Teachers emphasized the usefulness of DIBELS data in planning instruction and identifying learners needing intervention. Parents observed greater engagement in literacy activities at home and appreciated communication from teachers about learner progress.

Table 3. Summary of Qualitative Themes from Teacher and Parent Interviews

Stakeholder	Positive Themes	Challenges or Themes for Improvement
Teachers	Data-driven instruction; early intervention	Time constraints; need for additional training
Parents	Enhanced engagement; clear communication	Desire for more frequent updates

The themes indicate that DIBELS was perceived as useful not only as a measurement tool but also as a guide for instructional decisions and parent-school collaboration. However, implementation quality depends on teacher preparation, available time, and consistent communication with families.

DISCUSSION

The study demonstrates that DIBELS can function as an effective assessment and monitoring tool for kindergarten literacy development. The pre-assessment scores identified learners' starting points and highlighted literacy domains requiring intervention. This supports the role of early assessment in detecting literacy deficits before they become more serious about reading difficulties.

The significant improvement from pre-assessment to post-assessment across all four domains suggests that regular DIBELS administration, when linked with instruction, can support literacy growth. The gains in phonemic awareness, alphabetic principle, accuracy, and fluency show that assessment data can help teachers target instruction and monitor progress more systematically.

The qualitative findings explain how these quantitative improvements may have occurred. Teachers used DIBELS data to tailor instructional strategies and provide timely support, while parents reported increased engagement in reading-related activities at home. These findings underscore the importance of connecting assessment data with classroom teaching and family communication.

Despite the positive results, implementation challenges were noted. Teachers identified time constraints and the need for further training, while parents desired more frequent updates. These issues suggest that DIBELS is most effective when schools provide sufficient time, training, and communication structures. The results therefore support continued use of DIBELS with stronger professional development and parent involvement mechanisms.

CONCLUSION

The study concludes that the Dynamic Indicators of Basic Early Literacy Skills assessment is an effective tool for identifying early literacy deficits and supporting measurable improvement in kindergarten literacy development at Dagat-Dagatan Elementary School. Learners demonstrated significant gains in phonemic awareness, alphabetic principle, accuracy, and fluency. Teachers and parents also perceived DIBELS as beneficial because it supports data-driven instruction, early intervention, improved engagement, and clearer communication about learner progress.

Recommendations

- Ongoing professional development should be provided to teachers to strengthen DIBELS administration, scoring, interpretation, and instructional use.
- Parent communication should be improved through regular updates on learner progress and practical home-literacy strategies.
- School leaders should allocate sufficient time and resources for assessment of administration, data analysis, and instructional planning.
- A monitoring and feedback system should be established to review DIBELS implementation and adjust literacy support based on results.
- DIBELS-supported instruction should be adapted for diverse learner needs, particularly for learners with limited prior literacy exposure or socioeconomic disadvantages.

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Conflict of Interest Statement

The author declares no relevant financial or non-financial conflict of interest in the conduct of the study or in the preparation of this manuscript.

References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). Standards for educational and psychological testing. American Educational Research Association.
- Coyne, M. D., Kame'enui, E. J., Simmons, D. C., & Harn, B. A. (2016). Effective teaching strategies that accommodate diverse learners (4th ed.). Pearson.
- Fien, H., Smith, J. L. M., Smolkowski, K., Baker, S. K., Chaparro, E. A., Baker, D. L., & Otterstedt, J. (2015). Kindergarten predictors of reading skills: A longitudinal comparative analysis of the DIBELS, AIMSweb, and MAP assessments. *The Elementary School Journal*, 116(2), 170-194. <https://doi.org/10.1086/683984>
- Good, R. H., Kaminski, R. A., & Cummings, K. D. (2014). DIBELS Next technical manual (4th ed.). Dynamic Measurement Group. https://dibels.org/docs/techreports/DIBELSNext_Technical_Manual.pdf
- Good, R. H., & Powell-Smith, K. A. (2015). DIBELS Next: Assessment manual. Dynamic Measurement Group.

- Jenkins, J. R., Hudson, R. F., & Johnson, E. S. (2020). Curriculum-based measurement: Readiness for what? *Learning Disabilities Research & Practice*, 35(1), 14-24. <https://doi.org/10.1111/ldrp.12197>
- Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Wiley.
- McConnell, S., Bradfield, T., & Wackerle-Hollman, A. (2014). Use of technology to facilitate time-efficient early literacy assessment. *NHSA Dialog*, 17(3), 85-100. <https://doi.org/10.1080/15240754.2014.938681>
- Powell-Smith, K. A., Stoner, G., Shinn, M. R., & Good, R. H. (2015). The effects of curriculum-based measurement oral reading fluency on instructional decision-making: A literature review. *Special Services in the Schools*, 16(1-2), 145-165. https://doi.org/10.1300/J008v16n01_09
- Seethaler, P. M., & Fuchs, L. S. (2014). The predictive utility of kindergarten screening for math difficulty: Do kindergartners' addition fluency and number combination fluency predict later math difficulty? *Learning Disabilities Research & Practice*, 29(3), 124-137. <https://doi.org/10.1111/ldrp.12039>
- Stuart, M., & Stainthorp, R. (2016). *Reading development and teaching*. SAGE Publications.
- University of Oregon Center on Teaching and Learning. (2018). *DIBELS Next assessment manual*. University of Oregon.