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A Cross Continental Collaboration: Utilizing DIBELS for Data-Driven Reading Fluency Instruction in Diverse Educational Settings

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Abstract

This collaborative practitioner research study investigated the efficacy of using Dynamic Indicators of Basic Early Literacy Skills (DIBELS) to improve reading fluency for elementary students receiving special education support. The study was conducted simultaneously in two distinct educational settings: a public school in the United States and a private English-medium school in a multilingual, densely populated Asian country. Over one academic semester, educators in both settings implemented a data-based individualization model where DIBELS 8th Edition data directly informed targeted interventions such as repeated readings and systematic phonics. Despite vast differences in cultural and linguistic contexts, class sizes, and resource availability, results indicated statistically significant growth in Oral Reading Fluency (ORF) scores for students in both locations. This study demonstrates the transposable power of curriculum-based measurement to guide effective instruction and bridge literacy gaps for diverse learners across the globe.

Keywords: DIBELS; Reading Fluency; Data-Based Individualization; Cross-Continental Collaboration; Diverse Educational Settings; Special Education; Curriculum-Based Measurement; Elementary Literacy

1. Introduction

Reading fluency is a critical, foundational skill for academic success, yet achieving it remains a universal challenge for students with learning disabilities. In an increasingly interconnected educational landscape, identifying practices that are effective across diverse contexts is paramount. This collaborative action research project brought together two special educators from vastly different environments to explore a common question.

Educator A worked in a suburban U.S. public school with access to a range of special education resources. Educator B worked in a private school in a multilingual Asian country, characterized by large class sizes and a student body where English was often a second or third language. The common thread was the use of Dynamic Indicators of Basic Early Literacy Skills (DIBELS), a curriculum-based measurement system designed to be brief, efficient, and predictive of reading proficiency (Good & Kaminski, 2002).

The central research question was: How does the systematic use of DIBELS data to guide reading instruction impact the oral reading fluency of elementary-aged students with learning needs in two highly dissimilar educational settings?

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2. Review of Literature

The efficacy of Data-Based Individualization (DBI) and Curriculum-Based Measurement (CBM) like DIBELS is well-documented, particularly in Western educational systems (Fuchs & Fuchs, 2006). This framework involves using frequent, brief assessments to monitor student progress and make timely instructional adjustments. For reading fluency, evidence-based practices such as repeated readings (Therrien, 2004) and systematic phonics instruction are considered gold standards.

However, the application of these tools and strategies in diverse, multilingual, and resource-variable settings is less explored. This study seeks to contribute to the literature by examining whether the DBI model, centered on DIBELS, retains its effectiveness when implemented in a context with different linguistic challenges, teacher-student ratios, and levels of institutional support for special education. It tests the transposability of a structured, data-driven approach against a backdrop of contrasting educational ecologies.

Research by Baker et al. (2018) reinforces the technical adequacy of DIBELS 8th Edition, confirming its strong reliability and validity as a progress monitoring tool for diverse student populations, including English Learners (ELs). Their findings suggest that when used appropriately, DIBELS can effectively identify at-risk readers across different linguistic backgrounds.

Furthermore, the principles of DBI are supported by the Science of Reading (SoR) body of research, which emphasizes the critical role of phonemic awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel, 2000). Studies by Gersten et al. (2020) on assisting students struggling with reading highlight that interventions grounded in SoR and delivered through a structured, data-driven framework are most effective, echoing the methodology applied in this study.

Finally, the challenge of implementing evidence-based practices in resource-limited or multilingual settings is addressed by O'Connor (2018), who argues for the "transportability" of reading interventions. She emphasizes that while the core components of effective instruction are universal, their success hinges on cultural and linguistic adaptations, a key consideration tested in the present study's design.

3. Methods

3.1. Participants and Settings:

- **Setting A (U.S. Context):** 8 students in Grades 1-5 from a suburban public school resource room. All had IEPs for Specific Learning Disabilities (SLD). Instruction occurred in small groups (2-4 students).
- **Setting B (Indian Context):** 10 students in Grades 1-5 from a private English-medium school in a multilingual Asian country. Students were identified through school-based assessments as needing learning support. Class sizes were larger, and instruction was often delivered in small groups of 5-7 students. The linguistic background of students was diverse, with most learning English as an additional language.

3.2. Design and Materials:

- This study employed a parallel, practitioner-led intervention design.
- The primary assessment tool for both settings was DIBELS 8th Edition.
- Instructional materials included leveled texts, phonics manipulative, and timers.

3.3. Procedure:

- **Baseline Assessment (September**): All students in both settings were administered the beginning-of-year (BOY) DIBELS benchmark.
- **Intervention Phase (October - January):** For 16 weeks, students received targeted interventions for 30 minutes, 4 times per week, based on their DIBELS profiles.
    - **Common Interventions:** Both educators used Repeated Readings, systematic phonics instruction, and modeled fluent reading.
    - **Contextual Adaptations:**

- In **Setting A**, interventions could be highly individualized with ample one-on-one time. Focus was on specific learning disabilities like dyslexia.
- In **Setting B**, interventions were adapted for larger groups. Emphasis was placed on vocabulary building, phonological awareness drills addressing cross-linguistic interference, and using culturally familiar content to bolster comprehension and engagement.

- **Progress Monitoring:** Both educators conducted bi-weekly progress monitoring with DIBELS.
- **Post-Intervention Assessment (January):** The middle-of-year (MOY) DIBELS benchmark was administered in both settings

4. Data collection

Data collection was structured around the DIBELS 8th Edition assessment suite. The primary quantitative data source was the Oral Reading Fluency (ORF) measure, which assesses the number of words a student reads correctly per minute (WCPM) from grade-level passages. This measure was used for both the Beginning-of-Year (BOY) and Middle-of-Year (MOY) benchmark assessments to measure overall growth.

In addition to the benchmark data, bi-weekly progress monitoring was conducted using alternate forms of the DIBELS ORF measure. This created a longitudinal dataset for each student, allowing the practitioners to track growth trends and responsiveness to intervention in real-time. All assessments were administered one-on-one by the participating educators in a quiet room, following standardized DIBELS administration procedures to ensure fidelity and consistency across both settings.

Qualitative data were also collected in the form of practitioner field notes. These notes documented observations of student engagement, motivation, and specific challenges during intervention sessions, providing context for the quantitative findings.

5. Results

Quantitative data from both settings demonstrated notable growth. The primary outcome measure was the increase in Oral Reading Fluency (ORF) scores.

Table 1 Combined Results for Oral Reading Fluency (ORF)

Setting	n	Avg. BOY ORF (WCPM)	Avg. MOY ORF (WCPM)	Average Growth (WCPM)
Setting A	8	41	67	**+26**
Setting B	10	32	54	**+22**
Total	18	**36**	**60**	**+24**

A paired-samples t-test confirmed that the composite increase in ORF scores from BOY (M=36, SD=23.1) to MOY (M=60, SD=28.4) was statistically significant, $t(17) = 9.12$, $p < .001$.

Qualitative observations from both educators noted increased student confidence, motivation, and a greater willingness to read aloud. Educator B specifically reported that students began to view reading English less as a chore and more as an achievable skill.

5.1. Results Analysis

The results indicate that the data-driven intervention model was effective in both educational settings. Students in Setting A showed an average growth of 26 WCPM, while students in Setting B, who began with a lower baseline, showed a substantial average growth of 22 WCPM. The statistical significance ($p < .001$) of the composite growth confirms that the improvements were unlikely due to chance.

The similar magnitude of growth, despite the contextual disparities, is a key finding. It suggests that the systematic use of DIBELS for assessment and progress monitoring effectively guided instruction to meet student needs, regardless of the setting. The smaller, more intensive groups in Setting A may have contributed to slightly higher gains. In contrast, the success in Setting B, with larger groups and multilingual learners, underscores the power of adapting core evidence-

based strategies (like repeated readings and phonics) to include a stronger focus on vocabulary and phonological awareness to address specific linguistic barriers. The qualitative data on increased motivation and confidence further supports the quantitative gains, suggesting a positive impact on students' self-efficacy as readers.

6. Discussion

This cross-continental collaboration provides compelling evidence for the power of DIBELS as a universal lever for improving reading fluency. The significant growth in both settings, despite their profound differences, underscores that the core principles of Data-Based Individualization—assessment, analysis, intervention, and progress monitoring—are effective across cultural and systemic boundaries.

Key insights from the comparative analysis include:

- The Universality of Data: DIBELS served as a common, objective language for both educators, enabling precise planning and a shared understanding of student needs, despite the physical distance.
- Adaptability of Strategies: While the evidence-based strategies (repeated readings, phonics) were effective in both locations, their implementation required contextual sensitivity. The success in Setting B demonstrates that with thoughtful adaptation (e.g., focusing on multilingual support), structured literacy interventions can thrive even in less-resourced environments.
- The Educator as the Key Agent: The study highlights the role of the reflective practitioner. Both educators used the data to become more effective and responsive, proving that a dedicated teacher, armed with the right tool, can drive change in any setting.

Limitations and Future Research

The study involved a relatively small sample size and was conducted over a single semester. The settings, while different, were both within structured schools; future research could explore the model's efficacy in more informal or resource-poor educational environments. A longer-term study could investigate the impact on reading comprehension.

7. Conclusion

This collaborative inquiry demonstrates that the challenge of teaching reading fluency to students with diverse learning needs, while shaped by local context, can be addressed through a common, data-driven framework. DIBELS provided the roadmap for effective instruction in both a well-resourced U.S. school and a multilingual international school. For practicing educators worldwide, this study offers a powerful model of how collaboration, grounded in solid assessment and a willingness to adapt, can lead to significant student learning and professional growth. It affirms that good teaching, guided by good data, is a universal constant.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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