

DECODING THE DASHBOARD: A CRITICAL RESPONSE TO ADVOCACY FOR A CONSTRUCT OF ETHICAL DATA LITERACY IN LANGUAGE TEACHING

Rabia Rehman

Lahore Garrison University

Email: rabiarehman@lgu.edu.pk

Abstract

This study looks at how language education increasingly uses data from school software and adaptive learning platforms. This creates a big teaching contradiction. While these systems claim to give personalized feedback on student performance, they often turn the complex, cultural process of learning a language into simple numbers that lack context. This can accidentally favor students who speak only one language and frame others as lacking skills. This article contends that technical data skills alone aren't enough for teachers; instead, argue that teachers need more than just technical skills to read this data. They need a "Critical Data Literacy" (CDL), built on the habit of carefully reflecting on their practice. The researcher has made a three pillar framework: Interrogate, Contextualize and Humanize, as reflective fix. This framework will turn the instructors from passive information consumers to active proponents. The proposed method helps them read dashboard analytic through an equity lens, recover their professional judgment, and map assessment to the rich realities of multilingual learners. This ideology is about denial of the data but an appeal for a considerate, thoughtful and ethical incorporation of the data into humanistic work in language teaching, proposing a pragmatic anchor between critical theory and classroom practice.

KEYWORDS: *AI-supported language teaching feedback, teacher agency, critical data literacy, datafication, reflective practice, three-pillar framework.*

Introduction

The ubiquity of learning analytics in education—the datafication of educational practices—has generated a central tension in language teaching. A teacher examines her dashboard: Maria, a Spanish speaker who has recently arrived in the country, consistently times out of a vocabulary app she is required to use but exhibits flashes of extraordinary fluency and initiative during peer-led dialogue projects. The adaptive algorithm signals her as “at-risk.” “It's the classic problem that exists in classrooms all over the world,” he says. LA offers the potential for objective, fine-grained understanding of student progress (Viberg et al., 2020). However, language learning is an inherently sociocultural, cognitive and identity-infused process, not a mere computational issue (Kramersch, 2020). Generic efficiency-based algorithms applied to multilingual-multicultural settings run the risk of misrepresenting communicative competence, invisibility trans-linguaging, and/or pathologizing difference (Darvin, 2023).

The dominant institution-level response has been to build technical “data literacy,” or a working interpretation bent. This, however, implicitly accepts the framing and values already built into the dashboard. A critical void remains: although research has expanded within both Critical Data Studies (CDS) and Language Assessment Literacy (LAL), language teachers have no practical, pedagogical lens to address this particular paradox. This is a gap which, this article suggests, requires the shift from consuming data to thinking critically about it. We offer a reflexive framework of CDL, which we

argue is a crucial aspect of LAL for the digital era. Co-designed using participatory design, the three-pillar approach; Interrogate, Contextualize and Humanize provides teachers with practical heuristics to ethically make sense of what algorithms do and their own professional judgment.

Theoretical framework

Connecting Critical Data Studies and Teacher Agency

To appreciate the influence of the dashboard, it was necessary to understand data as power. Data-Thought: An Essential Digital Literacy In such respect, Critical Data Studies (CDS) advances the idea "that data is not neutral... that data is shaped by and fundamentally a product of human decisions about what to measure/index/categorize and by whom, as well as ultimately who gets to decide what outcomes matter" (Selwyn, 2020). A point grammar score is interpreted as a trade-off between linguistic forms and pragmatics made by a designer. A measure might read cognitive tradeoff, or cultural respect, as indifference. With the article on accuracy with which we compared NAELLTs above, for many linguistically diverse learners those measures encode a Standard Language Ideology that favors dominant norms, occluding strategic engagement with multilingual resources (García & Lin, 2017).

For that reason, teacher CDL must go beyond graph reading at the same time as it is give over to asking questions of reflexive, epistemological inquiry: And whose language gets validated by this metric? What parts of my students' communicative repertoires are unseen here? What have my own biases to do with this algorithmic judgment? This cautious position is in line with and somewhat extends current conceptions of LAL that now also need to account for digital testing ethics (Pill, 2022). The bridge fundamental between this critical theory and classroom practice is reflective practice (Schön, 1983), allowing teachers to work through the "datafication gap" as analytics comes head to head with professional observation. The framework, therefore, is positioned at a new intersection of CDS and LAL in the context of teacher agency, contributing to the ability for teachers to reclaim their professional identity within an evermore automated educational arena.

Methodology

This is an approach using a participatory design framework to build the tool (Spinuzzi, 2005). A total of 14 in-service language teachers engaged in a six month PD round. It consisted of three stages: (1) identifying shared "dashboard dilemmas" with teachers, (2) co-developing thinking strategies, and (3) trialing them in classrooms and reflecting on the processes through the diary.

A Reflective Schema: The Three Pillars Solution

This participatory approach resulted in a straightforward reflective model; the Interrogate, Contextualize, Humanize triad. These pillars can be used, in any order, by teachers to foster a critical use of data.

Pillar 1: Interrogate

This pillar deals with interrogating the source of the data.

- What are you actually measuring with this metric as a learning objective?
- What biases might the system have been trained on?
- Was this result of the student's control?

Pillar 2: Contextualize

This column combines data and anecdotal evidence.

- Triangulate dashboard metrics with classroom observations and student work.

- Find anomalies that expose unnoticed strengths.
- Engage students in a conversation about the data to invite their interpretation.

Pillar 3: Humanize

This pillar guides ethical decision-making.

- What behavior is appropriate in response to this information (if any), or should I ignore it or look for confirmatory evidence?
- How can I leverage this understanding to empower — rather than to judge — the learner?
- What’s a good way for me to record my professional rationale for data choices?

Discussion

From Framework to Practice

Former exploration with the framework had suggested that it has the potential to recast teacher agency. “One of the participants said, ‘The pillar that says “Interrogate” changed my relationship to the red flags on my screen. It turned from something I had to justify into the beginning of an inquiry.’”

To further illustrate the problem, consider this second vignette: An AI-powered writing assistant continually red-flags a student’s approach to telling his story because it is “off-topic.” Employing the form, the teacher Interrogates by questioning the tool’s cultural biases, Contextualizes by identifying student’s rhetorical skills and knowledge they bring to our classroom, and Humanizes by engaging in instruction that validates how student communicates while simultaneously teaching them more standard options.

Conclusion

Restoring the Soul of Assessment

The data deluge in education is here to stay. This reflective model also provides a pragmatic, ethical route for teachers to counter reductionism and redeem the humanistic soul of assessment. Through Interrogating, Contextualizing, and Humanizing; educators can convert data from a weapon of oppression to one for equity and professional power

Recommendations and Implications

To address this work and promote implementing the Interrogate– Contextualize– Humanize framework within language instruction, joint action is needed throughout the education ecosystem. For teacher training, Critical Data Literacy should be systematically included in pre-service and in-service education programmes, so that educators are equipped with the critical reflexivity and ethical competencies to navigate datafied learning contexts. At the institutional level, we recommend that schools and universities have ethics-by-design procurement policies in order to critically assess pedagogical assumptions, values and possible biases built into analytic platforms prior to engaging with them. Thereby, researchers may reinforce the framework through design-based and ethnographic studies on the impact of such a framework on teacher agency, assessment practices and multilingual learner equity across diverse contexts. Finally, policy makers should mandate that ed-tech developers produce plain-language “Pedagogical Impact Statements” explaining what their algorithms actually track — and fail to track — especially for diverse and multilingual learners. Such collective actions can be helpful in fostering a more ethical, equitable and reflexive use of data in language education.

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