# Digital Literacies And The Construction of The "Language Barrier"

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#### **Questioning the Language Barrier**

Schoolchildren in U.S. are officially categorized as "at risk" by virtue of being home speakers of a language other than English (González & Artiles 2015). Like the constructs "language gap" (Avineri et al. 2015) and "word gap" (García & Otheguy 2017), the term "language barrier" reflects how schools come to equate bilingualism with learning deficits. The objective of the study was to explore how language barriers might be created, reinforced or challenged through use of digital literacies and educational technology.

The language barrier is featured in professional discourses to characterize interactions between users of mutually unintelligible languages, including interactions between employers/employees, businesses/clients, health care workers/patients and legal workers and those seeking legal assistance. In the education of bilingual learners, the construct is widely assumed. The U.S. Equal Educational Opportunities Act of 1974 requires public schools to address academic deficits incurred as a result of language barriers, and to provide special programs for children learning English. For example, Palmer (2011, p. 117) describes bilingual teachers as working "extremely hard... to build understanding among their students across language and cultural barriers." Thus, many future educators begin teacher preparation with the notion of a language barrier firmly established.

Applied linguistics provides a set of understandings about how languages work in the minds and social worlds of language users, and guidance for using this knowledge to help resolve real life problems (Hall, Smith, & Wicaksono 2017). Applied linguists can facilitate communication between/among people who do not share a common language, including helping people to learn/teach a new language and to learn/teach academic content through language. Increasingly, solutions to these problems involve the use of digital technologies (Chapell & Sauro 2017). Critical applied linguistics leads us to question language-related practices and examine beliefs about language and language use that may be harmful to language users and communities.

## The Study

This qualitative case study explored how the construct of a language barrier is enacted through instruction featuring digital technologies. The setting was a school library in a Spanish/English dual language (DL) school serving economically disadvantaged students in the U.S. Midwest. Few studies have focused on how DL school libraries serve bilingual learners (Smith & Thompson 2017). As the primary site for introducing educational technology, the library was an ideal space for asking how digital literacies may reinforce or challenge the notion of a language barrier in bilingual schooling.

Participants were 65 students in primary grades 3-5. Fourth and fifth graders were of Mexican and Guatemalan origin who had begun kindergarten in a transitional bilingual education program and had become English dominant in reading and writing. Third graders were in the school's first DL cohort, including children from English- and Spanish-speaking homes, and multilingual children who spoke Q'anjob'al and other indigenous languages. Three quarters of the students were born in the U.S. and nearly all were children of immigrants. The school librarian was an English/French bilingual with ten years of experience and a masters degree in Library Science. Although certified to teach Spanish as an additional language, this was her first time teaching in Spanish.

Data consisted of field notes from weekly participant observation of library instruction during the 2016-2017 school year, yielding a corpus of 28 observations and debriefing sessions with the librarian immediately following each lesson. Analysis focused on a literature unit in which children used Chromebooks and Google Classroom to respond to a survey about their favorite authors and books and to write questions for children's author Xavier Garza. Afterwards, children completed a survey about their computer preferences and home access to computers and the internet.

#### **Findings**

Results are reported in two areas: (1) linguistic and physical demands of using Chromebooks, and (2) students' stratified levels of home access to digitally-mediated literacies.

- (1) Difficulties included charging Chromebook batteries, remembering log-in and password information, locating Google Classroom in the menu bar; selecting the English or Spanish version of the survey; seeing information written in Spanish (tiny font); using "radio buttons" to toggle between survey options; and typing accent marks and diacritics on English language keyboards. In addition to lost instructional time, about half the children gave up in frustration and completed the project using pencil and paper, a pattern observed across grade levels.
- (2) To understand how digital technologies seemed to hinder learning by Spanish-speaking children, students were asked "Which is easier to use, the Chromebook with touchpad or a keyboard and mouse?" Students overwhelmingly preferred the keyboard/mouse option, and most had no computer at home or limited access. Children who preferred Chromebooks had one or more computers at home. All children with multiple computers at home were home language speakers of English. Home internet access for Spanish-speaking children was primarily through mobile phones. No student reported having a home computer or device with a Spanish language keyboard, and Spanish language keyboards were unavailable at the school.

#### Discussion

The use of educational technologies associated with online curriculum seemed to hinder, rather than facilitate, learning by bilingual learners. However, the barriers to learning identified did not support the notion of a language barrier inherent in bilingual children or expressed by the librarian. Rather, these difficulties were attributed to the use of educational hardware designed for English monolinguals and to children's lack of home access to digital forms of literacy.

Further research on how educational technology shapes children's opportunities to develop biliteracy in school libraries is needed, but is potentially risky because critique may be seen to undermine support for DL school libraries and bilingual librarians. Critiques of educational technologies may pose particular risks for poor schools if they are perceived as rejecting the latest developments. The study suggests directions for applied linguistics research and practice with bilingual learners. What alternative term(s) more accurately describe the educational challenges bilingual children encounter in schools? What advice can we offer bilingual educators who wish to use digital technologies without reinforcing differences in students' access to knowledge and tools for the production of knowledge?

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