Re-examining English language teaching and learning for adolescents through technology

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A R T I C L E   I N F O

1. Introduction

In U.S. schools today, one in five children speaks a language other than English at home and more than 4.4 million students are classified at school as having limited proficiency in English (NCES, 2015). At the same time, a globalizing workplace and standards-based school reforms have increased the academic demands of schooling in ways that many worry may exacerbate the well-documented achievement gap between English learners[1] and English-proficient students (Fine, Jaffe-Walter, Pedraza, Futch, & Stoudt, 2007; Gándara & Hopkins, 2010). As schools across the U.S. and around the globe rapidly adopt models of instruction that integrate technology into classrooms, research is urgently needed to understand the potential of this approach for emergent bilinguals (Margolis & Suárez-Orozco, 2014). Although there is a significant and growing body of research on promising practices to meet the needs of students who are not yet proficient in academic English in the secondary grades (Echevarría, Vogt, & Short, 2014; Walqui & van Lier, 2010), little is known about the effects of technology-enhanced learning on adolescent English learners and their teachers.

Both the linguistic demands of the new standards and the use of technology to address them are relevant areas of concern for teachers of the growing population of emergent bilinguals in the U.S. and abroad. In contrast to teaching English in the previous century which focused heavily on the four skills—reading, writing, speaking, and listening—texts and language learning in today's classrooms are inherently multimodal and multilingual (García & Wei, 2014). In fact, in the U.S., the new standards explicitly identify multimodal texts as a key component of literacy (CCSS, 2010; Kibler, Valdés, & Walqui, 2014) and technology skills have been mandated in K-12 education since No Child Left Behind (2000). Language and content learning can be scaffolded by the multimodal and hybrid language practices of emergent bilingual students, but this area of expertise is frequently neglected in the pedagogical knowledge teachers of English receive (e.g. Bunch, 2013; Fillmore & Snow, 2005). Given the changing expectations for educating emergent bilinguals and the many different program types for teaching English that coexist in today's classrooms, teachers of English are challenged to redefine teaching and learning in their classrooms with technology.

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[1] A school classification of immigrant children and youth who are learning English as a second language in a country where English is the majority language.

2. Theoretical frame

This study is situated in sociocultural theory (Vygotsky, 1978) as the basis for student-centered learning, multimodal literacies (Kress, 2003) as a sophisticated framework for literacy in the 21st century, and culturally responsive teaching (Gay, 2000) as a strengths-based pedagogical approach to teaching multilingual students.

Sociocultural theory provides a useful framework for understanding student-centered learning among diverse students. In this framework, learning is socially constructed and cognition and communication are mediated by social interaction (Lantolf & Thorne, 2006; Luria, 1973; Vygotsky, 1978). All learning is first social and then individual, moving from inter-mental to intra-mental. For English learners to internalize knowledge—or self-regulate—both individualized instruction and social collaboration are beneficial. Through collective dialogue and scaffolding, children are able to move from the level of skill or knowledge as determined by independent problem-solving to a higher level of development as determined through problem solving in collaboration with an adult or more capable peers—the Zone of Proximal Development (Vygotsky, 1978). Students working together are able to co-construct contexts in which expertise emerges as a feature of the group and can then be internalized by the individual, moving from other-regulation to self-regulation. Sociocultural theory highlights the role of active engagement and social interaction in second language learning, showing the importance of peers and peer scaffolding (Brooks & Donato, 1994; Ohta, 2001; Swain & Lapkin, 1998) interaction with an expert-learner (Aljaafreh & Lantolf, 1994; Nassaji & Swain, 2000) and the use of a first language to enable second-language learners to explore form-meaning relationships and mediate cognitive activity (Lantolf & Thorne, 2006; Sternberg & Grigorenko, 2002). The pedagogical value of creating spaces where emergent bilingual students can collaborate and develop group expertise is well-established as a necessary condition for language learning.

This study also draws on theories of multiliteracy (New London Group, 1996) and multimodality (Kress, 2003) which ascribe value to the modes of communication that are active in the classroom (e.g., written, visual, audio, gestural, and spatial) (Mills, 2010; New London Group, 1996). In the context of an increasingly globalized society where cultural and linguistic diversity are the norm, multimodal pedagogies acknowledge the plurality of language and of text forms—including digital forms—that are routinely and unconsciously used for communication and accessing information (Barton, Hamilton & Ivanic, 2000; Cope & Kalantzis, 2000; Kress, 2003). A multimodal approach to instruction incorporates an array of modal resources, from traditional notions of literacy as written language to spoken language, images, sound, video, three-dimensional models, and movement (Kress, 2003; Vaish & Towndrow, 2010). Literacy involves both the representational modes (what a culture makes available for making meaning such as speech, writing, image, gesture, music) and the media of dissemination (what the culture makes available for distributing these meanings, including messages, books, computer screens, magazines, videos, films, radios, and chats); written language—the traditional form of literacy—is simply one of several modes through which learning occurs (Jewitt, 2008).

Multimodal pedagogy is a central feature of technology-enhanced learning environments (Jewitt, 2008; LaBanca, Worwood, Schauss, LaSala, & Donn, 2013). Optimally, the traditional roles of teacher and student can be reconstructed as classrooms expand to allow creative student engagement with a range of communication tools. A serious look at the multiplicity of modes that are always and simultaneously in use in a classroom suggests that meaning resides in all of them and traditional classrooms that focus exclusively on one type of text are, in effect, creating artificial boundaries to keep the real world out (Kress, 2003). Youth intuitively acquire new literacies in out-of-school spaces, drawing attention to the ways that language and communicative practices are shared, sustained, and modified within groups (Street, 2003) and to the innovative and productive potential of informal literacies in digital environments beyond school (Lankshear & Knobel, 2003; Street, 2003). There are, however, several assumptions about 21st century adolescent literacies that require examination. For instance, research shows that not all adolescents are necessarily "digital natives" (Mills, 2010; Prensky, 2001), which raises questions about the degree to which support for multimodal practices needs to be balanced with autonomy in school settings (Vasudevan, 2006). Adolescents need teachers to guide, scaffold and model new technical proficiencies as they are applied to academic tasks.

In many school settings, language minority youth are limited in what knowledge and skills they can draw on (Gee, 1990; Moll, Amanti, Neff, & Gonzalez, 1992). Culturally responsive teaching articulates the need for teachers to work toward equity by holding high expectations for all students and building on a deep knowledge of the strengths students bring from their homes and communities (Gay, 2000). By creating a classroom environment focused on assets, teachers and students scaffold increasingly complex tasks, building on students' skills and experiences as students share and achieve high expectations for themselves. Technologies provide the means to integrate materials and perspectives that reflect the lives of immigrant students beyond school walls in new ways, including drawing on community partnerships and home literacy practices which are frequently ignored in traditional classroom settings.

3. Review of literature

Teachers that work with adolescent emergent bilinguals are challenged to meet the needs of this diverse group while at the same time preparing them for competitive post-secondary education and work environments. An extensive body of research documents the achievement gap between adolescent English learners and English-proficient students in the U.S. (National Center for Educational Statistics, 2015), a gap that widens during adolescence when many English learners attend schools poorly equipped to meet their needs at the same time as the demands of schooling intensify (Ruiz-de-Velasco & Fix,