Open Education and Second Language Learning and Teaching

The Rise of a New Knowledge Ecology

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1 Open Educational Resources in Heritage and L2 Spanish Classrooms: Design, Development and Implementation

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In this chapter, we examine the application of the multiliteracies pedagogy Learning by Design (Cope & Kalantzis, 2015; Kalantzis *et al*., 2005, 2016) to the design of open educational resources (OER) for the teaching of Spanish as a heritage (HL) and second language (L2). We first discuss the tenets of the framework, and the reasons why it is appropriate to guide the development of OER materials. We then compare two differing instructional initiatives. The first focuses on HL learners at a Hispanic-serving institution, and the second one, on L2 students at a basic language program at an R1 institution. Based on these two experiences, we address issues related to the design and development of materials such as the following: (1) the identification of students' needs (considering personal and institutional expectations and outcomes); (2) the development of materials (the determination of thematic and linguistic content); and (3) the implementation process at both institutions. Finally, we summarize the institutional and pedagogical factors that characterized both experiences.

Introduction

Interest in incorporating multiliteracies pedagogies (e.g. Blyth, 2018; Warner & Dupuy, 2018) and open educational resources (OER) (Chun *et al*., 2016) to classroom instruction is growing. This is evidenced by articles in recent anniversary or special issues of influential journals in the field of second language (L2) pedagogy such as *Foreign Language Annals*, *L2 Journal* and *The Modern Language Journal*. The impetus behind this growth in interest seems to be the desire not only to offer L2 learners instruction that will allow them to move beyond the more limited opportunities for

language use offered by more constrained methods such as communicative language teaching (CLT) (Allen & Paesani, 2010; Byrnes, 2006), but also to create opportunities for active use of the target language in a variety of social environments through engagement with different kinds of genres and modes. In other words, it seems that momentum is growing for the adoption of more comprehensive, discourse-oriented instructional approaches that will prepare L2 learners to work with and produce a variety of multimodal texts, rather than restricting use of the target language to interactions.

Also at the heart of this particular movement in L2 pedagogy is the important role that learner identity and investment play in the learning process, a role that the field has been discovering the importance of since the early 2000s (Norton, 2013; Pittaway, 2004). Indeed, the existing identity literature (e.g. Norton, 2010; Norton & Toohey, 2011) has emphasized the crucial need for L2 pedagogy not only to recognize learners as multidimensional beings, but also to engage them with instruction at a personal level, fostering both their investment in the learning process and their own legitimation as L2 meaning makers (Pittaway). Clearly, this type of instruction cannot rely (solely) on the use of commercial textbooks that offer one-size-fits-all materials that students might have a hard time relating to because the resources might not reflect their lifeworld (i.e. the personal and social aspects of their lives) (Swaffar, 2006). Also, generic materials can constrain opportunities to expose students to diverse multimodal texts. And this is where OER can help. Blyth (2014) argues that an OER-based curriculum can transform 'closed educational systems [(such as those found in traditional L2 classrooms) into open educational environments through] the use of… materials that are easily edited and personalized, [and an emphasis on…] a belief that knowledge is best understood as a creative process of co-constructed meaning' (2014: 662).

Even though a few researchers in the fields of heritage language (HL) and L2 teaching have explored the benefits of combining multiliteracies-based teaching practices and OER materials or applications (e.g. Blyth, 2018; Thoms & Poole, 2018; Zapata, 2017; Zapata & Mesa Morales, 2018), no one (to the best of the authors' knowledge) has looked at multiliteracies-based OER initiatives from conception to implementation. The purpose of this chapter is to do so by presenting two instructional projects, one with HL learners (HLLs) at a Hispanic-serving institution in California, and the other with L2 students at a basic language program at a public university in the southern region of the United States. The first section of the paper introduces the multiliteracies framework *Learning by Design* and justifies why it is an appropriate framework to guide development of OER materials. The subsequent two sections describe the two initiatives in detail, focusing on the identification of student needs, the development of materials and the implementation process. The concluding sections of the chapter examine important institutional and instructional factors, such as funding, technological

support and teacher expertise – specifically, how they can limit or contribute to the success of this type of initiative.

Learning by Design and OER

Learning by Design (*L-by-D*) is a pedagogical framework developed in the early 2000s by Mary Kalantzis, Bill Cope and colleagues (Kalantzis *et al*., 2005) in their native Australia. The framework is a reformulation of some earlier ideas on literacy proposed in 1996 by the New London Group, which Kalantzis and Cope were part of (New London Group, 1996). The focus of *L-by-D* is the development of learners' literacy, which (according to Kalantzis and her colleagues) needs to be 'recalibrated to align with contemporary conditions for meaning-making – including multimodality and the diverse forms of communication that we encounter in the wide range of social and cultural contexts in our daily life' (Kalantzis *et al*., 2016: 73). This objective, they argue, can only be achieved by expanding the traditional view of literacy, which is based on the printed medium and 'a single, official, or standard form of language' (Cope & Kalantzis, 2015: 1), to that of *multiliteracies*, where, in order to be effective meaning-makers in contemporary society (i.e. to become *multiliterate*), learners need to work within the 'dynamic, culturally, and historically situated practices of using and interpreting diverse… [multimodal] texts to fulfil particular social purposes' (Kern, 2000: 6).

Students' multiliteracies development can only be accomplished through their involvement in activities that will allow them *to do* in order *to know*. This is what Cope and Kalantzis (2015) conceptualize as 'thinking-in-action,' dividing it into four knowledge-making processes: experiencing, conceptualizing, analyzing and applying, which are at the core of the *L-by-D* pedagogy. These processes allow for the organization, implementation, documentation and tracking of the learning process (Cope & Kalantzis, 2009). Also, they can be regarded as 'epistemic moves' that offer learners opportunities to *do* in order *to know* in different ways. Specifically, students do the following:

(1) experience known and new meanings (departing from known concepts and experiences, they move forward to explore new situations and/or information);
(2) conceptualize meanings either by naming (by grouping into categories, classifying and defining) and/or with theory (by formulating generalizations and establishing connections among concepts as well as by developing theories);
(3) analyze meanings both functionally (by focusing on structure and function, and establishing logical connections between form and meaning), and critically (by evaluating different perspectives, interests and motives); and

(4) apply meanings both appropriately (by engaging in real-life applications of knowledge, developing products similar to the ones they have been exposed to), and creatively (by applying new knowledge in innovative and creative ways). (Kalantzis & Cope, 2012)

Instructors can design tasks within these knowledge-making processes, thereby 'purposely and deliberately "weaving" backwards and forwards between a variety of activity types or forms of engagement in order to ensure specific subject matter and other learning goals' (Kalantzis & Cope, 2010: 208).

The active role that the *L-by-D* framework assigns to learners is directly connected to two core principles, *belonging* and *transformation* (Kalantzis *et al.*, 2005). Kalantzis and Cope (2012b) believe that instructional environments should not ignore who learners are and must incorporate resources that are connected to their lifeworld. In this way, instruction can be linked to the complex, diverse identities of learners, who in turn can feel recognized as 'designers of *uniquely* voiced meanings' (Kalantzis & Cope, 2012a: Kindle location 3899, emphasis added). This connection will foster *belonging to* and investment in the student learning process. Kalantzis and her colleagues argue that this type of in-depth investment (or engagement) is conducive to *transformation*, defined as learning that 'takes the learner into new places, and along the journey, acts as an agent of personal and cultural [change]' (Kalantzis *et al.*, 2005: 30).

Through its focus on the use of different multimodal ensembles that are connected to the personal experiences of students and/or those of their families/communities, *L-by-D* can thus make learner-centered, transformational, multiliteracies pedagogy possible. As learners work with different kinds of genres and non-linguistic resources associated with a variety of subjects in the four knowledge processes, they can analyze social function, structure and linguistic/non-linguistic meaning-making resources. Learners can then apply their new knowledge in the development of their own personal projects, expressing their identity and newly developed literacies. The principles and objectives of this kind of pedagogy are congruent with those advocated by open education practices and with the affordances they offer (Blyth, 2014; Thoms & Thoms, 2014).

Like the *L-by-D* framework, open education practices rely on the use of multimodal material that can be digitally reused, redistributed, revised and remixed to answer the needs of specific student populations (Wiley & Green, 2012). These practices also highlight the need to create instructional environments that 'promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path' (ICDE, 2011). Thus, open teaching practices grounded in the tenets of *L-by-D* could have the potential not only to be conducive to learners' multiliteracies development, but also to result in belonging and transformation through the use of materials directly connected to students'

lifeworlds and specifically adapted to answer their particular needs. Indeed, in a recent large-scale study (21,822 participants) at the University of Georgia on the impact of OER-based instruction on the learning outcomes of students from historically underserved groups (both in terms of ethnicity and socioeconomic status), Colvard *et al*. (2018) showed that this type of instruction can lead to positive results in terms of academic success and lower rates of withdrawal. This finding points to the potential of OER to bring more equity to educational environments. Another related important affordance of OER-based instruction is the financial benefit offered to learners, who do not need to invest in the purchase of what is normally an expensive textbook and/or purchase access to a commercial learning-management platform.

In what follows, we introduce two open education initiatives that were conceived, developed and implemented in accordance with the principles of *L-by-D*. The first focuses on an intermediate Spanish class for HLLs in a Hispanic-serving institution, and the second, on a fourth-semester L2 Spanish course in a public R1 university. Both experiences are discussed in detail.

Case #1: Intermediate Spanish for HLLs at a Small, Hispanic-serving Institution

Institutional background

The specific context of this OER project was a Hispanic-serving institution in Northern California, as classified by the Hispanic Association of Colleges and Universities.[1] Thirty-eight percent of the students at this institution are Hispanic, and have close ties with the Mexican-American communities in the county where the university is located, as well as the two most closely associated counties. Most of the residents in these counties live in rural communities and are employed in agriculture and industries related to it, such as packing (Regional Analysis and Planning Services, 2012). Therefore, a high percentage of the university's Hispanic students comes from households with parents whose main occupation is related to the cultivation of fruits and vegetables. These positions are generally low-paid, and, as a result, the annual per capita income in this region is quite low compared to other areas of California. For example, in 2016, the per capita figures in the three counties range from the mid $20,000 to the low $30,000 (United States Census Bureau, 2016).

Students with a Humanities-related major at the university where this project took place are required to fulfill a foreign language requirement. HLLs with an intermediate level of proficiency can do so by taking the only HL Spanish class offered at the institution. Until the 2014–2015 academic year, this class was based on its L2 equivalent, and thus, students worked with a textbook that was designed for L2 instruction but did not

take into account HLLs' specific needs. As a result, every semester, in their course evaluations, the students enrolled in this class would voice their complaints about its content, particularly because they felt they had been asked to buy an expensive textbook that did not address their linguistic needs, did not reflect their bicultural identity, and did not discuss any issues that pertained to their community/ies. Also, that academic year, the existence of this pedagogical drawback had been noticed by the two scholars who had conducted the external review of the department where the class was housed, with the evaluation report recommending a reconsideration of the goals and content of this class, which included a change in the instructional materials used.

In order to address this recommendation and fulfill an important academic requirement as well as offer the most appropriate pedagogical program to strengthen/develop HLLs' multiliteracies skills in Spanish, the first author of this chapter, who at the time was coordinator of the L2 and HL classes in the department in question, decided to undertake a series of curricular actions. Also, since the majority of HLLs came from low-income families, another important goal was to relieve them from the financial cost of purchasing a commercially produced, and academically inadequate, textbook that most of them could not afford. Since the coordinator was also the undergraduate advisor for the department and had a teaching load of two classes per academic semester, the first step was to secure time release. The institution supported her efforts with a grant that, though it would not cover possible financial costs of the materials development effort, would at least provide this person with a course release. This support, though limited, was crucial for the success of the project.

Planning and design

Based on her knowledge of L2 and HL acquisition and pedagogy, and her experience working with Spanish HLLs at the institution (she had taught the HL class, and she had conducted studies with this population of students), the coordinator chose to develop open-source digital instructional resources under the tenets of the *L-by-D* pedagogy. There were three main reasons why she felt this was the most appropriate course of action. First, there was a body of existing literature that had shown how the framework had been successfully implemented in the Australian educational context for the teaching of English to learners from underrepresented groups with similar socioeconomic backgrounds as her students (e.g. Hepple *et al*., 2014; Mills, 2010; Neville, 2008). She also believed that since the pedagogy emphasized both the individual needs of students and the essential connection between the learners' 'experiential world (lifeworld) [and] the formal learning [of which they would be part]' (Kalantzis *et al*., 2005: 37), this emphasis would allow her to create OER materials that would reflect her students' realities and would allow them to connect

to the instruction they were receiving at a personal level (*belonging*). The third reason was related to *L-by-D*'s rejection of traditional views of 'literacy,' for the more current and realistic 'multiliteracies,' which reflects both of the following: (1) 'the variability of conventions of meaning in different cultural, social or domain-specific situations' (Kalantzis *et al.*, 2016: 1); and (2) the multimodal nature of modern communication and meaning making (e.g. video, audio, visual, printed, etc.). That is, even though the main objective of this class was the development of literacy skills among HLLs in the academic register, the coordinator believed it was pedagogically responsible to offer HLLs a comprehensive instructional environment that would nurture their use of Spanish not only in other registers (tying their language use to their community and lifeworld), but also in different multimodal forms of communication.

The next step was to design the content of the class. To achieve this goal, the coordinator followed a *backward design* (Wiggins & McTighe, 1998), the starting point of which was the determination of instructional outcomes. To that effect, and following Wiggins and McTighe's design steps, she outlined the class' curricular priorities in terms of both desired attained performance (i.e. what students would be able to do with the HL) and knowledge (linguistic, cultural, and multimodal). For example, she considered the following: (1) what was 'worth being familiar with;' (2) what was 'important to know and do;' and (3) what was essential for 'enduring understanding' (Wiggins & McTighe, 1998: 3). Other important institutional aspects that were considered were contact hours and available technology resources. The resulting outcomes included the following:

Students demonstrate:

Interpretive communication skills by reading, listening to and viewing authentic materials from authors belonging to Hispanic communities in the United States (focus on Mexican-American authors/artists);

An understanding of major ideas as well as important information using effective reading, listening and viewing strategies to interpret authentic and semi-authentic materials; and

Presentation skills in writing and speaking through essays, presentations and other multimodal projects.

When it came to content per se, the main point of reference was the demographic information introduced at the beginning of this section, which pointed to a clear thematic focus: The project needed to be based on the Mexican-American experience in the United States. This theme was divided into important social issues relevant to the lives of the HLLs and their community(ies). Thus, content was organized into four instructional modules centered on the following themes: (1) immigration (*la inmigración*); (2) labor (*el trabajo*), with an emphasis on agriculture; (3) family and cultural traditions (*la familia y las tradiciones culturales*); and

(4) my bilingual/bicultural identity (*mi identidad bilingüe/bicultural*). The materials used in the four modules were works of fiction (accessed by students through the institution's library) and non-fiction belonging to different genres, websites, works of art, comic strips, photos, interviews and documentaries. The materials-development process (research, design and development) took a period of six months, and it would not have been possible without the course release given by the institution.

The four modules included materials to be taught during one semester (the class met twice a week for 110 minutes per session), and approximately four weeks of instruction were devoted to each of them (more information is provided in the next section). Students' in-depth exploration of and work with the modules' multimodal resources was achieved through activities in *L-by-D*'s four knowledge processes: experiencing (the known and the new), conceptualizing (by naming and with theory), analyzing (functionally and critically) and applying (appropriately and creatively) (Cope & Kalantzis, 2015; Kalantzis & Cope, 2010, 2012a; Kalantzis *et al*., 2005, 2016). The instructional activities developed allowed students to do the following: (1) reflect on their understanding of particular aspects of the four topics in the course and be exposed to new perspectives on those understandings; (2) conceptualize essential aspects of the content presented and formulate connections to other concepts and theory in general; (3) analyze and understand linguistic and discursive aspects from a functional perspective (how meaning is expressed) and critically (by examining what perspectives, interests and motives were presented in each resource); and (4) apply their new knowledge not only appropriately in related academic (e.g. producing similar texts on a different topic) and/or real-life tasks, but also creatively, in the development of innovative, multimodal (and thus, hybrid) projects (e.g. a digital comic book to explore the topic of their bilingual/bicultural identity). The materials in each module were interrelated thematically and instructionally.

All the activities in each module were created digitally on Google Docs, and they were organized in Google Drive (one folder per module).[2] The plan was for students to work on most tasks digitally; however, face-to-face classroom meetings would also be part of instruction. In addition, the course was structured to support students in the form of peer collaboration and instructor assistance through any or all of the following: (1) face-to-face interactions; (2) synchronous exchanges (via Google Hangouts); and (3) asynchronous exchanges (email and comments on Google documents). Assessment was based on learners' development of e-Portfolios on Weebly for Education sites (https://education.weebly.com/). That is, each student would be required to create a free Weebly for Education site where they would showcase their work throughout the semester. Learners could choose either to make their sites public or to keep them anonymous. Weebly was chosen because it was the

department's preferred website-development platform for Capstone e-portfolios, and the coordinator was encouraged to use it for the initiative. Also, it was user-friendly (easier than Google sites), and there was no cost involved for the department, institution or students.

Implementation process

The newly developed resources were implemented in two sections of the Spanish as a HL class, but data were only collected in one section. The participants were 31 students. The instructor's first step was to collect information about her students' access to technology. To her dismay, she realized that more than half of her class did not have a computer or easy access to one when not at the university. Also, 40% of the students in her class had demanding part-time jobs. These circumstances forced her to adapt the syllabus and materials for the class in three different ways: (1) she moved her class to a computer lab for the rest of the semester (that way, all students had access to a computer); (2) she reserved class time for students' completion of digital projects; and (3) she provided free paper copies of the digital materials to those students who requested them. These changes resulted in a reduction in the number of tasks originally developed for the course and the planned forms of digital feedback. However, the new structure also brought about more in-class collaboration and technology use, which provided students with more opportunities to work with peers and to interact with the instructor in a face-to-face environment. Also, some students broadened their knowledge of Google Apps and other programs (e.g. Pixton) used in the class.

The instructional cycle followed the same pattern for all units, and the point of departure was always students' lifeworld (*L-by-D*'s experiencing the known). Resorting to multimodal ensembles, the instructor would trigger students' discussion and reflection on their views on and experiences with a particular topic, and she would then introduce a new perspective on it (*L-by-D*'s experiencing the new) through the use of a text (written, visual, or hybrid) developed by an author belonging to the same community as the students. The next instructional steps involved learners' work in the other three knowledge processes: conceptualizing, analyzing and applying (each process took approximately one week of instruction). Figure 1.1 provides an example of how these epistemic moves were pedagogically integrated in module #4: 'My Bilingual/Bicultural Identity' (*Mi identidad bilingüe/bicultural*). This module was organized around the autobiographical genre, and was based on the following instructional resources: (1) literary works (three poems) by two Latino writers; (2) photos; and (3) the web-based comics application Pixton (https://www.pixton.com/).[3]

EXPERIENCING THE KNOWN: Questions about role of Spanish and English in their lives (worldviews)

EXPERIENCING THE NEW: Poems
Gustavo Perez Firmat's *Billingual Blues* + NPR interview on connection between language and identity
Jane Medina's (1999) *T-Shirt & El diente y el ratón*
Photos: Featuring Hispanics at traditional celebrations

CONCEPTUALIZING BY NAMING: Organizational features of the text,
information in each part of the text, type of text

CONCEPTUALIZING WITH THEORY:
Based on previous analysis: Type of text, generalization (identity poems and photos)

ANALYZING FUNCTIONALLY: Focus on language:
linguistic/"grammar" differences between ensembles—how meaning is expressed,

ANALYZING CRITICALLY: Authors' purpose: Message to convey;
meaning differences/similarities among ensembles; emotional effectifeness

APPLYING APPROPRIATELY AND CREATIVELY: Multimodal identity text: Comics (images and text).
Before task: Analysis of biographical comics (Gene Luen Yang's *American Born Chinese*) &
training on Pixton (platform used for development of autobiographic comics)
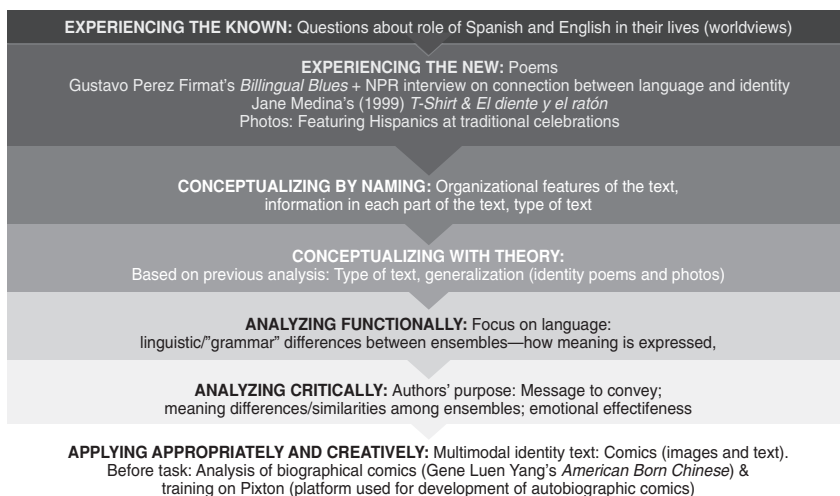
Figure 1.1 Schematic representation of the activities in the module *Mi identidad bilingüe/bicultural* grounded in *Learning by Design*. Each knowledge process corresponds to those in the original model developed by Kalantzis and her colleagues (Kalantzis *et al.*, 2005, 2016)

Implementation results

The pedagogical experience that resulted from the implementation of OER materials had positive results in terms of students' literacy development (see Zapata, 2017) and attitudes towards instruction. For example, students praised the instructional resources not only for their financial benefit (i.e. not having had to purchase a commercial textbook), but also for the following pedagogical aspects: (1) the varied nature of the materials, ['which made the class fun. Class assignments were enjoyable and helped better understand material (sic)' – Student #4]; (2) their cultural value ['The assignments and class readings encouraged us to embrace our different Hispanic cultures' – Student #8]; (3) their academic value ['I was able to develop different skills in Spanish, such as writing and reading. We also learned about our Hispanic heritage' – Student #21]; (4) the opportunities for the collaborative construction of knowledge ['I liked how we worked with partners and could learn together' – Student #29]; and (5) their connection to themselves and their community ['Excellent choice of materials, resources, readings. They really allowed us to express our heritage and our background' - Student #30]. These positive opinions can be summarized in Student #2's words when describing the OER-based class: 'This course allowed me to better understand my culture while exercising and expanding the Spanish language. It helped me expand my vocabulary and also improved my written and oral skills. It really helped expand my knowledge about the cultural value of being a Spanish speaker.'

The comics developed by students in the bilingual/bicultural identity module, for example, provide evidence for these views. That is, the qualitative analysis of the multimodal resources in students' products reveals that, through this project, HLLs were able to use Spanish to express their emotions and perceptions of the topic and to connect to or reflect on their Mexican-American identities. Some students described feelings of confusion similar to the ones they had seen in Perez Firmat's (1995) work (Figure 1.2) while others felt that being bicultural was not an issue (Figure 1.3). Also, the meaningful, comprehensive combinations of images, written text and sometimes links to videos found in the comics show not only development at the level of literacy (e.g. most written texts were almost error free and exhibited grammatical complexity [use of complex clauses], which was not the case for the written assignments in module #1), but also the effective application of different modes of communication (an
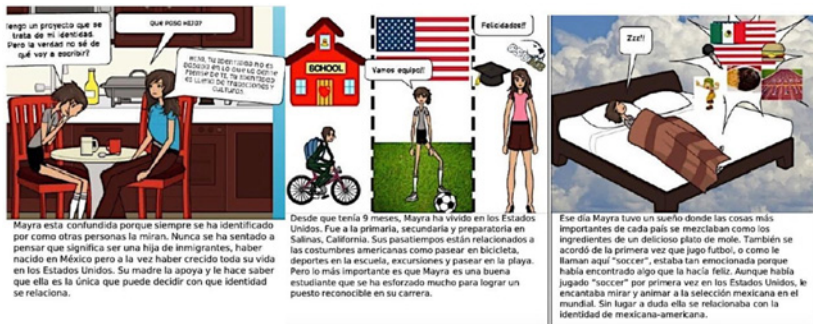

Figure 1.2 Student-generated text expressing the emotional challenge of developing an identity

Figure 1.3 Student-generated text expressing pride in personal identity

Estas tradiciones son en las que participo más y son típicas de un joven americano. Los partidos de fútbol americano cada viernes después de la escuela. La feria del condado donde vamos a comer comidas americanas; por ejemplo los funnel cakes, corn dogs y cotton candy. El rodeo donde nos ponemos nuestras botas y nos quedemos hasta las 11 de la noche para el concierto de country. Disneylandia, el sueño de cada niño americano y también el lugar favorito de muchas jóvenes. El río que queda a cinco minutos fuera del pueblo donde nos reunimos para refrescarnos y divertirnos.

Hay algunas tradiciones mexicanas en las cuales he participado hasta hoy. La peregrinación para el 12 de diciembre para honrar a la Virgen de Guadalupe. La celebración de Navidad en noche buena en vez de el 25 de diciembre: este día es una fiesta grande con mucha comida y como en cualquier fiesta mexicana con mucho alcohol. Una quinceañera, que simboliza la llegada de ser niña a mujer. Un partido de fútbol en cuál México le ganó a los Estados Unidos 4-2 en el 2011. Yo crecí siendo fanática de la selección mexicana así que esta derrota me trajo mucha alegría.

Figure 1.4 Student-generated text that includes personal photos

affordance of digital OER instruction grounded in *L-by-D*) to express personal emotions (Figure 1.4). Finally, when asked what they had discovered about their Spanish through this activity, students referred to both positive aspects of their performance (e.g. their newly found pride in their use of the language, their ability to express complex feelings) and still challenging points (e.g. difficulties with limited vocabulary). Overall, 90% of the students seemed to like the activity, as they felt it had allowed them to exercise their creativity and grow both as Spanish writers and technology users. These benefits clearly point to the potential of this kind of instruction (and materials) for the development of not only HLLs' literacy in Spanish, but also both their multiliteracies and digital literacy.

This first OER experience for the coordinator broadened her knowledge of the development and implementation of open education resources, on the one hand, and the institutional and pedagogical aspects that can benefit or hinder the success of this type of educational practice on the other. These new data provided a good point of departure for the next OER project she initiated, which will be presented in the next few sections of the paper.

Case #2: Intermediate Spanish for L2 Learners at an R1 Institution

Institutional background and planning and design

This second OER initiative constituted a pilot study for a larger materials development effort, an OER beginning Spanish textbook, the main goal of which would be the use of solely open instructional materials for the teaching of L2 Spanish to university students. The authors of this

paper were in charge of the textbook initiative, which was housed in an R1 university in the southern region of United States. The study was carried out in one section of a four-semester L2 Spanish class in Fall 2017, and it involved the participation of 23 students. The main objectives of this work were as follows: (1) to provide the authors with more experience as OER materials developers and implementers before embarking on the more comprehensive task of writing a full textbook; (2) to investigate students' attitudes towards OER instructional materials; and (3) to examine the development of L2 students' performance in the interpretive (reading) and presentational (writing) modes as compared to that of learners working with a commercial textbook.[4]

In summer 2017, the authors collaborated in the creation of four OER instructional units for the teaching of intermediate Spanish (American Council on the Teaching of Foreign Languages (ACTFL)'s intermediate-mid level of performance) by modifying and adapting existing open resources (e.g. authentic multimodal texts) and developing new ones. Prior to the beginning of this process, the first author visited the Center for Open Educational Resources and Language Learning at the University of Texas at Austin (COERLL; https://www.coerll.utexas.edu/coerll/), where she received guidance and suggestions for the use of Creative Commons licenses and ways to create open resources. This new knowledge, together with the second author's attendance of Center for Open Educational Resources and Language Learning (COERLL)-organized workshops, proved invaluable to their work.

As with the HL OER initiative, the materials-development process followed a backward design (Wiggins & McTighe, 1998), with the point of departure being the instructional outcomes (based on the theoretical and pedagogical bases of the program of which this class was part) expected in the four-semester class. The materials centered around four themes: (1) personal relationships (*Las relaciones personales*); (2) daily routines and other activities (*Las diversiones y la vida diaria*); (3) health and well-being (*La salud y el bienestar*); and (4) traveling (*Los viajes*). These topics matched those found in the commercial textbook (*Facetas*, 4th edn) used in other sections of the class. However, the open resources included not only more comprehensive and authentic material, but also content and tasks directly related to the lifeworld of the target student population. That is, the objective of the OER materials was twofold: (1) to expose students to multimodal ensembles created by members of the target cultures from a variety of social groups, and (2) to provide them with the opportunity to use Spanish to develop products for audiences that would go beyond the classroom environment (e.g. digital magazines that would be published in an online public platform), and that would allow for language use to express aspects of the self. In existing work, these two types of authenticity have been deemed essential for L2 learners' motivation and the success of their learning process (see Banegas *et al.*, 2019; Copland & Mann, 2012;

Pinner, 2019; Widdowson, 1990). Additionally, the open resources were designed to facilitate learners' work in *L-by-D*'s four knowledge processes: experiencing, conceptualizing, analyzing and applying (Kalantzis *et al.*, 2005, 2016). Even though the materials-development process ran smoothly, the authors still faced two challenges: (1) the determination of the way in which students would access the resources; and (2) the need to offer additional instructional practice akin to the one included in the commercial textbook's e-workbook.

In order to overcome the first challenge (students' access to materials), the two scholars in the project consulted with COERLL and the university's IT personnel. As with the HL OER initiative, it was determined that the most effective way for learners to work with the open resources would be through G Suite for Higher Education (Google Drive, Docs and Apps) (https://edu.google.com/higher-ed-solutions/g-suite/?modal_active=none), offered without additional cost to students (other than tuition) by the institution. This way, students would not only be able to have easy access to documents that they could download, modify and print, but they would also be able to collaborate synchronously and asynchronously with both their peers and instructor. In addition, Google allowed learners to create their own folders for the class where they would upload and store their work with private, instructor access. The four open units were therefore created in Google Doc format.[5]

The second challenge (the additional online practice) proved more taxing. Since both authors had other summer commitments, merely completing the main instructional material occupied most of their time and left little time to create extra workbook tasks. Therefore, they decided to solve this problem by agreeing to substitute the needed resources with existing online activities. In order to do so, they included links to those resources in the main Google documents, and asked students to submit screenshots of their completed assignments. Although at the time this seemed to be the most feasible and practical solution, it would become the main source of learner dissatisfaction during the implementation process, which is presented in the next section.

Implementation process

The newly developed instructional units were adopted in the section of the four-semester class taught by the second author of this paper in Fall 2017. Before the beginning of the semester, a Google folder was created for the section, with all the administrative (e.g. different criteria for assessment) and pedagogical resources organized into different subfolders (students were given view-only access to all the documents). The use of OER material was clearly stated in the syllabus, and the course instructor devoted most of the first week of classes to the following: familiarizing learners with the different

course components; guiding them in the establishment of individual Google folders; showing them how to access and work with Google Docs; and informing them on how to complete the extra homework activities.

Overall, the implementation process worked well, even though the learners were at first a bit anxious about the lack of a commercial textbook and expressed this concern. Perhaps these feelings were related to their previous experiences with L2 learning in the department where the study took place, which had been centered around the use of a book. Fortunately, this situation was temporary, and by the end of the first OER unit, most students in the class (19 out of 23, or 83%) expressed positive opinions about the class's open practices. By the end of the semester, only one student disagreed with the idea of taking another OER-based instruction class, while the remaining 22 strongly agreed ($n = 10$) or agreed ($n = 12$) with this idea. Despite this overall positive response, a quite specific common complaint throughout the semester was the way in which the extra homework activities had been chosen and organized. For example, some students felt that the assigned exercises did not fully line up thematically with the topics that were being discussed in class, while others had difficulties with the chosen links, and/or did not quite understand the online activities, which were often more complex than the ones they had completed in the previous textbook's e-workbook. These opinions clearly pointed to the need for future material to incorporate extra practice more aligned with the OER instructional units.

Implementation results

In spite of the homework difficulties and the learners' initial reluctance when faced with a lack of a commercial textbook, overall student L2 development and attitudes in this pilot OER experience were positive. Preliminary analyses of the quantitative data collected in this pilot section and those of the textbook-based sections suggest slightly better results in terms of students' L2 performance in the presentational (writing) mode of communication. Also, in an end-of-the-semester survey, the learners praised the OER material for a variety of reasons. For example, students felt that the material was more connected to real life and their own personal experiences:

'[The material] was really helpful because it had more real-life situations in it rather than what would be presented in a textbook, and this helped so much for the social aspect of Spanish speaking.' (Student #6)

'I know how to talk about more things that I would normally talk about like in English, instead of foreign concepts or random vocab words.' (Student #18)

'I feel like the examples used were very realistic and could actually be used and be helpful in this day and age.' (Student #7)

'It has got me thinking in new ways that a traditional Spanish book hasn't before because it's very applicable to real life.' (Student #14)

Learners also believed that the resources not only had contributed to their L2 development, but, perhaps more importantly, had also boosted their confidence as Spanish speakers:

'A better vocabulary and more confidence in speaking Spanish in general.' (Student #5)

'It enhanced my knowledge of vocabulary in everyday situations A TON.' (Student #15; emphasis in original text)

'[It] helped us hone our Spanish skills by practicing speaking, presentations, as well as writing.' (Student #2)

More practical, non-academic aspects of the material seemed to be important for these students as well, as can be seen in the following quotes:

'Not having to buy a book for this course was really convenient and a lot easier for me as a student. Instead of having to lug a book around and sheets of paper, it was easy to keep track of all my homework and class notes on my computer, ensuring that I was always prepared for class the next day.' (Student #10)

'The entire notion of a digitized book that does not involve a class code for a book exponentially helped in my understanding and accessibility of this course.' (Student #11)

'I love the fact that we had a free, online, open source book. It was very helpful and fiscally responsible.' (Student #12)

These comments show similarities with those expressed in the HL OER initiative covered in the previous section.

The L2 students' opinions on the impact of each of the instructional units on their individual learning were also submitted to sentiment analysis (SA) (Ignatow & Mihalcea, 2018). This type of analysis relies on 'the computational study of opinions, sentiments, emotions and attitude expressed in texts towards an entity [with the objective] of detecting, extracting and classifying opinions, sentiments and attitudes concerning different topics' (Ravi & Ravi, 2015: 14). In the last decade, SA has become a widely used tool in both industry and academics (e.g. see Zapata & Ribota, 2020, and, for a comprehensive review, Ravi & Ravi, 2015), and it has been deemed as an effective method in the analysis of students' motivation and views of instruction (Kim & Calvo, 2010; Ortigosa *et al.*, 2014). To conduct the SA in this study, the authors resorted to the online tool *Sentiment Analyzer* developed by Soper (n.d.). The main reasons behind this choice were the following: (1) the tool had been developed by an academic researcher, and (2) it had been highly ranked in the market (Fontanella, 2020). The SA scores resulting from the analysis of the four units showed a progression in the participants' perceived individual,

instructional benefits. For example, units 1 and 2 rendered overall sentiment or tone scores of 61.3 and 75.8 respectively (quite positive / enthusiastic) while the scores in units 3 and 4 were, respectively, 99.2 and 97.2 (very positive / enthusiastic).

The attitudinal and opinion data from both the HL and L2 OER experiences seem to suggest that OER-based instruction benefitted students both academically (see also Zapata, 2017) and financially. The two initiatives were also beneficial for the authors, who not only grew as scholars and researchers, but also as materials developers, which provided them with the reassurance needed to undertake the now-completed textbook project. In the next sections, they summarized the lessons they learned from their involvement in these two projects.

Lessons Learned from These Experiences

The two OER experiences detailed in this chapter were characterized by the same benefits and drawbacks described in the existing literature on open practices. For example, the collected HL and L2 student opinions seem to confirm the fact that open resources promote three important dimensions of authenticity. The first one is HL and L2 learners' exposure to real, socially varied uses of the target language (Widdowson, 1990). The second one is the possibility of creating opportunities for more authentic language use that not only reflects real-life applications, but also facilitates students' communication with audiences beyond those present in the classroom, which, in itself, has been shown to have motivating effects for both students *and* instructors (Banegas *et al*., 2019; Pinner, 2019). The third one is the opportunity to personally involve learners in both the curriculum and the learning process, which can result in belonging and investment (Beaven *et al*., 2013; Copland & Mann, 2012; Pinner, 2019; Thoms & Thoms, 2014; Zapata, 2017). In addition, the resources encourage collaboration among students, instructors and materials developers, which is conducive not only towards a more democratic instructional environment (Blessinger & Bliss, 2016), but also towards 'the integration of knowledge and social networks in order to connect people to ideas…within a community of practice' (Blyth, 2014: 662). Two more beneficial effects brought about by the OER materials in these two experiences were financial and practical advantages (in terms of access to and portability of resources). Such effects have been highlighted elsewhere in the literature (e.g. Blessinger & Bliss, 2016; Tuomi, 2013). In our case, the HL students saved $197 and the L2 students, $164. Naturally, it is also important to note the positive academic benefits of the OER materials. Specifically, findings from the HL experience (Zapata, 2017) suggest that the adoption of open resources resulted in the development of different aspects of students' Spanish literacy, their multiliteracies (i.e. the effective application of different modes of communication to express personal

meaning), and their digital literacy. In the case of the L2 learners, preliminary data analyses show that L2 development was similar in both the textbook-based and OER sections, which supports the results reported by Hilton (2016) and Clinton (2018) in their studies on the instructional effects of textbooks as compared to open materials.

The materials-development and -implementation processes also mirrored the existing literature. Both the success of the HL initiative and the difficulties that the authors faced in the two projects clearly point to the crucial role played by institutional support. It is undeniable that, without either release time and/or funding for, for example, additional personnel, it is extremely difficult for scholars to invest their expertise and effort into the creation of OER materials, a difficulty that has been emphasized in numerous publications (e.g. Carey & Hanley, 2008; Jhangiani *et al.*, 2016; McGowan, 2019; McMartin, 2008; Thoms & Thoms, 2014; Tuomi, 2013).

Another aspect of support that is often missing is the commitment of instructional units and their members to the adoption of open resources. That is, in both experiences, the authors faced resistance from either their department, or their colleagues, or both, which forced them to revisit their original plans and the ways in which they developed and implemented the OER materials. McGowan (2019) believes faculty resistance towards open education is connected to a variety of factors, such as their lack of knowledge of the affordances offered by this type of education and fears related to intellectual property and technology-based instruction.

Thus, if, as Blessinger and Bliss (2016) suggest, higher education is undergoing democratizing changes, and open education is at the core of those changes, it is essential for units across various levels of the university to provide incentives, information and training for faculty members to embark on and participate fully in open practices. Without this comprehensive kind of support, open education is limited, and this, in essence, goes against its very nature. We believe that a possible remedy for this situation would include not only the continued empirical investigation of OER experiences (Blyth, 2014), but also the wide dissemination of data (in local and scholarly environments), which can provide evidence of the many benefits that open practices can bring to higher education. It is also important that scholars advocate for these kinds of resources through collaborative efforts and participation in organizations such as the COERLL.

Finally, the two experiences offered further confirmation of the different kinds of expertise required from OER developers and implementers. First and foremost, it is essential for resources to be grounded in sound, research-guided theories and pedagogical practices in order to guarantee the quality of education offered to students (McGowan, 2019; Ossiannilsson *et al.*, 2016; Tuomi, 2013), which in turn points to the need for this kind of scholarly training. At the university level, this training could become part of methods classes for graduate teaching assistants in

which open education, multiliteracies frameworks and OER-enabled pedagogy could become curricular topics. In addition, since open resources reside in the digital realm, it is important for developers to feel comfortable with the use of different technologies, and/or have the resources to hire experts that can provide the needed support. Developers will also need to understand how Creative Commons licenses work in order to prevent copyright infringements and protect scholars' intellectual property.

Yet another crucial piece of both the development and implementation process is methodology. The experiences presented in this article showed how essential it is for instructors to apply sound pedagogical techniques incorporating concepts, such as scaffolding (Wood *et al.*, 1976), to guide students' access to and work with material that either might be in a different format than they are used to, or might require the use of language in more comprehensive tasks. Also, creating instructional environments that promote work within Vygotsky's (1978) zone of proximal development can foster students' collaborative construction of knowledge, which, in turn, can facilitate learning and aid in the effective use of the OER. Of course, tying together all these factors are *L-by-D*'s *belonging* and *transformation*: Both developers and implementers need to fully understand who their target students are, not only academically, but also socially. And they need to use this knowledge to create open resources that will answer their learners' specific needs. Without this knowledge and the willingness to continue adapting and re-creating, open practices might not succeed.

Notes

(1) A Hispanic-serving institution is defined as a 2- or 4-year college/university which 'meets three criteria: (1) they must be accredited and nonprofit; (2) have at least 25% Latino/a undergraduate full-time equivalent enrollment; and (3) at least 50% of the Latino/a students are low income' (Contreras *et al.*, 2008: 72).

(2) At the end of the instructional period, the materials created for the class were revised and published in the Creative Commons site at the institution where this study took place. Further revisions were later undertaken, and the new versions of the units are now available at http://bit.ly/OERHerSpan.

(3) The three poems used were *Bilingual Blues* by Gustavo Pérez Firmat (Pérez Firmat, 1995), and *T-Shirt* and *El diente y el ratón* by Jane Medina (Medina, 1999). Students developed their hybrid autobiographical comics on Pixton, which was the only application that required paid licenses for use, and was financially supported by the university's Provost Office.

(4) The theoretical, pedagogical and methodological bases for the innovation were the *World-readiness standards for foreign language learning* (National Standards in Foreign Language Education Project, 2015), *ACTFL performance descriptors for language learners* (ACTFL, 2012), the 2013 Integrated Performance Assessment manual (Adair-Hauck *et al.*, 2013), and high-leverage teaching practices (Glisan & Donato, 2017).

(5) The units are now available for use at http://bit.ly/IML2Material.

References

Adair-Hauck, B., Glisan, E.W. and Troyan, F.J. (2013) *Implementing Integrated Performance Assessment*. Alexandria, VA: American Council on the Teaching of Foreign Languages.

American Council on the Teaching of Foreign Languages (ACTFL) (2012) *ACTFL Performance Descriptors for Language Learners*. Alexandria, VA: ACTFL.

Allen, H.W. and Paesani, K. (2010) Exploring the feasibility of a pedagogy of multiliteracies in introductory foreign language courses. *L2 Journal* 2, 119–142.

Banegas, D.R., Roberts, G., Colucci, R. and Sarsa, B.N. (2019) Authenticity and motivation: A writing for publication experience. *ELT Journal* 74 (1). DOI: 10.1093/elt/ccz056.

Beaven, A., Comas-Quinn, A. and Sawhill, B. (2013) Introduction on case studies of openness in the language classroom. In A. Beaven, A. Comas-Quinn and B. Sawhill (eds) *Case Studies of Openness in the Language Classroom* (pp. 1–8). Dublin: Research-publishing.net.

Blessinger, P. and Bliss, T.J. (2016) Introduction to open education: Towards a human rights theory. In P. Blessinger and T.J. Bliss (eds) *Open Education: International Perspectives in Higher Education* (pp. 11–26). Cambridge: Open Book Publishers.

Blyth, C. (2014) Open educational resources and the new classroom ecology. *The Modern Language Journal* 98, 662–664.

Blyth, C. (2018) Designing meaning and identity in multiliteracies pedagogy: From multilingual subjects to authentic speakers. *L2 Journal* 10 (2), 62–86.

Byrnes, H. (2006) Perspectives: Interrogating communicative competence as a framework for collegiate foreign language study. *The Modern Language Journal* 90, 244–266.

Carey, T. and Hanley, G.L. (2008) Extending the impact of open educational resources: Lessons learned from MERLOT. In T. Iiyoshi and M.S.V. Kumar (eds) *Opening Up Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge* (pp. 181–195). Cambridge, MA: MIT Press.

Chun, D., Kern, R. and Smith, B. (2016) Technology in language use, language teaching, and language learning. *The Modern Language Journal* 100, 64–80.

Clinton, V. (2018) Savings without sacrifice: a case report on open-source textbook adoption. *Open Learning: The Journal of Open, Distance and e-Learning* 33, 177–189.

Colvard, N.B., Watson, C.E. and Park, H. (2018) The impact of Open Educational Resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education* 30, 262–276.

Contreras, F.E., Malcom, L.E. and Bensimon, E.M. (2008) Hispanic-serving institutions: Closeted identity and the production of equitable outcomes for Latino/a students. In M. Gasman, B. Baez and C. Sotello Viernes Turner (eds) *Understanding Minority-Serving Institutions* (pp. 71–90). Albany: State University of New York Press.

Cope, B. and Kalantzis, M. (2009) Multiliteracies: New literacies, new learning. *Pedagogies: An International Journal* 4, 164–195.

Cope, B. and Kalantzis, M. (2015) The things you do to know: An introduction to the pedagogy of Multiliteracies. In B. Cope and M. Kalantzis (eds) *A Pedagogy of Multiliteracies: Learning by Design* (pp. 1–36). London: Palgrave Macmillan.

Copland, F. and Mann, S. (2012) *The Coursebook and Beyond: Choosing, Using and Teaching Outside the Text*. Tokyo: Abax.

Fontanella, C. (2020) *The Best 12 Sentiment Analysis Tools in 2020*. See https://blog.hubspot.com/service/sentiment-analysis-tools.

G Suite for Higher Education [Computer software]. https://edu.google.com/higher-ed-solutions/g-suite/?modal_active=none.

Glisan, E.W. and Donato, R. (2017). *Enacting the World of Language Instruction: High-Leverage Teaching Practices*. Alexandria, VA: ACTFL.

Hepple, E., Sockhill, M., Tan, A. and Alford J. (2014) Multiliteracies pedagogy: Creating claymations with adolescent, post-beginner English language learners. *Journal of Adolescent & Adult Literacy* 58 (3), 219–229.

Hilton, J. (2016) Open educational resources and college textbook choices: A review of research on efficacy and perceptions. *Educational Technology Research and Development* 64, 573–590.

ICDE (2011) *International Conference on Data Engineering.* See http://www.icde2011.org/.

Ignatow, G. and Mihalcea, R. (2018) *An Introduction to Text Mining: Research Design, Data Collection, and Analysis.* Los Angeles: Sage.

Jhangiani, R.S., Green, A.G. and Belshaw, J.D. (2016) Three approaches to open textbook development. In P. Blessinger and T.J. Bliss (eds) *Open Education: International Perspectives in Higher Education* (pp. 179–198). Cambridge: Open Book Publishers.

Kalantzis, M. and Cope, B. (2010) The teacher as designer: Pedagogy in the new media age. *E-Learning and Digital Media* 7 (3), 200–222.

Kalantzis, M. and Cope, B. (2012a) *Literacies.* Cambridge: Cambridge University Press.

Kalantzis, M. and Cope, B. (2012b) *New Learning: Elements of a Science of Education* (2nd edn). Cambridge: Cambridge University Press.

Kalantzis, M., Cope, B. and the Learning by Design Project Group (2005) *Learning by Design.* Melbourne: Victorian Schools Innovation Commission and Common Ground Publishing.

Kalantzis, M., Cope, B., Chan, B. and Dalley-Trim, L. (2016) *Literacies* (2nd edn). Cambridge: Cambridge University Press.

Kim, K. and Calvo, R. (2010) Sentiment analysis in student experiences of learning. In R.S.J. Baker, A. Merceron and P.I. Pavlik Jr. (eds) *Educational Data Mining* (pp. 111–120). Pittsburg: LearnLab and Carnegie Learning.

Kern, R. (2000) *Literacy and Language Teaching.* Oxford: Oxford University Press.

McGowan, V. (2019) Institution initiatives and support related to faculty development of open educational resources and alternative textbooks. *Open Learning: The Journal of Open, Distance and e-Learning.* DOI: 10.1080/02680513.2018.1562328.

McMartin, F. (2008) Open educational content: Transforming access to education. In T. Iiyoshi and M.S.V. Kumar (eds) *Opening Up Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge* (pp. 135–147). Cambridge, MA: MIT Press.

Mills, K. (2010) What learners 'know' through digital media production: Learning by Design. *E–Learning and Digital Media* 7 (3), 223–236.

Moodle [Open source learning management system]. See https://moodle.org/.

National Standards in Foreign Language Education Project (2015) *World-Readiness Standards for Foreign Language Learning.* Alexandria, VA: ACTFL.

Neville, M. (2008) *Teaching Multimodal Literacy Using the Learning by Design Approach to Pedagogy: Case Studies from Selected Queensland Schools.* Altona, Australia: Common Ground.

New London Group (1996) A pedagogy of Multiliteracies: Designing social futures. *Harvard Educational Review* 66, 60–92.

Norton, B. (2010) Language and identity. In N.H. Hornberger and S.L. McKay (eds) *Sociolinguistics and Language Education* (pp. 349–369). Bristol: Multilingual Matters.

Norton, B. (2013) *Identity and Language Learning: Extending the Conversation* (2nd edn). Bristol: Multilingual Matters.

Norton, B. and Toohey, K. (2011) Identity, language learning, and social change. *Language Teaching* 44, 412–446.

Ossiannilsson, E., Altinay, Z. and Altinay, F. (2016) Transformation of teaching and learning in higher education towards open arenas: A question of quality. In P. Blessinger and T.J. Bliss (eds) *Open Education: International Perspectives in Higher Education* (pp. 159–178). Cambridge: Open Book Publishers.

Ortigosa, A., Martín, J.M. and Carro, R.M. (2014) Sentiment analysis in Facebook and its application to e-learning. *Computers in Human Behaviour* 31, 527–541. https://doi.org/10.1016/j.chb.2013.05.024

Pérez Firmat, G. (1995) *Bilingual Blues*. Tempe, AZ: Bilingual Press.

Pinner, R. (2019) *Authenticity and Teacher-Student Motivational Synergy: A Narrative of Language Teaching*. New York: Routledge.

Pittaway, D.S. (2004) Investment and second language acquisition. *Critical Inquiry in Language Studies: An International Journal* 1 (4), 203–218.

Pixton [Computer software]. See https://www.pixton.com/.

Ravi, K. and Ravi, V. (2015) A survey on opinion mining and sentiment analysis: Tasks, approaches and applications. *Knowledge-Based Systems* 89, 14–46. See https://doi.org/10.1016/j.knosys.2015.06.015.

Soper, D. (n.d.) *Sentiment Analyzer* [Computer software]. See https://www.danielsoper.com/sentimentanalysis/default.aspx.

Swaffar, J.K. (2006) Terminology and its discontents: Some caveats about communicative competence. *Modern Language Journal* 90, 246–249.

Thoms, J.J. and Poole, F. (2018) Exploring digital literacy practices via L2 social reading. *L2 Journal* 10 (2), 36–61.

Thoms, J.J. and Thoms, B.L. (2014) Open educational resources in the United States: Insights from university foreign language directors. *System* 45, 138–146.

Tuomi, I. (2013) Open educational resources and the transformation of education. *European Journal of Education* 48, 58–78.

United States Census Bureau (2016) *QuickFacts*. See https://www.census.gov.

Vygotsky, L.S. (1978) *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Warner, C. and Dupuy, B. (2018) Moving toward multiliteracies in foreign language teaching: Past and present perspectives…and beyond. *Foreign Language Annals* 51, 116–128.

Widdowson, H.G. (1990). *Aspects of Language Teaching*. Oxford: Oxford University Press.

Weebly for Education [Online platform for website development]. (https://education.weebly.com/)

Wiggins, G. and McTighe, J. (1998) *Understanding by Design* (1st edn). Upper Saddle River, NJ: Merrill Prentice Hall.

Wiley, D. and Green, C. (2012) Why openness in education? In D.G. Oblinger (ed.) *Game Changers: Education and Information Technologies* (pp. 81–89). See http://www.educause.edu/research-publications/books/game-changers-education-and information-technologies (accessed March 22, 2018).

Wood, D.J., Bruner, J.S. and Ross, G. (1976) The role of tutoring in problem solving. *Journal of Child Psychiatry and Psychology* 17, 89–100.

Zapata, G.C. (2017) The role of digital, *Learning by Design* instructional materials in the development of Spanish heritage learners' literacy skills. In G.C. Zapata and M. Lacorte (eds) *Multiliteracies Pedagogy and Language Learning: Teaching Spanish to Heritage Speakers* (pp. 67–106). New York: Palgrave Macmillan.

Zapata, G.C. and Mesa-Morales, M. (2018) The beneficial effects of technology-based social reading in L2 classes. *Lenguas en Contexto* 9 (Suplemento 2018–2019), 40–50. See http://www.facultaddelenguas.com/lencontexto/?idrevista=25#25.40.

Zapata, G.C. and Ribota, A. (2020) The instructional benefits of identity texts and learning by design for learner motivation in required second language classes. *Pedagogies: An International Journal*. https://doi.org/10.1080/1554480X.2020.1738937.