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A Match Made in Heaven: An Introduction to *Learning by Design* and Its Role in Heritage Language Education

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Introduction

Two decades ago, the scholars in the New London Group (NLG) (1996; Cope and Kalantzis 2009a) predicted the many changes that we would see in the way we communicate, express ourselves, teach, and learn. Based on the trends on globalization and technology that they saw, they also proposed that the traditional concept of literacy, tied to the printed medium and to "a single, official, or standard form of language" (Cope and Kalantzis 2015, 1), and the way in which we taught it were inadequate for a generation for whom learning already involved much more than the printed, "official word." What was needed was a definition and a pedagogy that would encompass not just the printed but also other modalities of communication present in the everyday reality in which the new generation was growing. In a globalized world, we were becoming multimodal and multilingual meaning makers, and therefore, we could no longer refer to "literacy": We needed to talk about "multiliteracies."

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The notion of a "pedagogy of Multiliteracies" was thus born, with the objective to "address the variability of meaning making in different cultural, social, or domain-specific contexts," implying that "it [was] no longer enough for literacy teaching to focus solely on the rules of standards forms of the national language: …Learners [needed] to become able to negotiate differences in patterns of meaning from one context to the next" (Ibid., 3). It was no longer enough to teach "literacy" devoid of society's various ways of making meaning: Learners needed to become aware that "every choice of text design represents particular stagings of the world, positionings and beliefs, reconstructed by the reader or writer through experience, associations, and analysis" (Samaniego and Warner 2016, 198), interpreting and understanding the specific literacy resources (e.g., linguistic and non-linguistic) that guide each different kind of text and the meaning that is to be conveyed.

The new pedagogy of Multiliteracies was theoretically connected to Halliday's (1994) systemic functional linguistics (SFL), whose overarching principle is that language is a semiotic system that cannot be separated from its social function, as it expresses meaning according to the different social contexts in which it is used. From this perspective, "language is a resource for making meaning in context and the context predicts or suggests the language that will be used…according to the social and cultural contexts in which meaning is exchanged" (Fang and Schleppegrell 2010, 591). In the pedagogy of Multiliteracies, the principles of SFL are present in the importance that the approach bestows upon the connections among language, culture, and meaning as they are realized in different multimodal meaning-making manifestations beyond printed texts and speech (Kress 2013). The approach, thus, allows us to guide learners in their understanding of "what still matters in traditional approaches to reading and writing [e.g., linguistic resources and genre], and [of] what is new and distinctive about the ways in which people make meaning in the contemporary communications environment" (Kalantzis et al. 2016, 1).

Since it was first presented by the NLG (1996), the pedagogy of Multiliteracies has undergone development and change.[1] For example, specific pedagogical approaches, such as *Learning by Design* (Cope and Kalantzis 2015; Kalantzis et al. 2016), have originated from its tenets,

and both earlier and more recent versions have guided a multitude of pedagogical projects in Australia and, in the last ten years, in the United States. This chapter examines some of the projects in Australia,[2] focusing on the role that *Learning by Design* has played specifically in the teaching of English to minority students at all levels of instruction. This work also introduces the concept of Spanish heritage learner used throughout this book as well as analyzes the pedagogical needs of those students who can be classified as such, particularly focusing on university students in the United States. The final part of the chapter brings forward the idea that, based on those needs and on existing work on *Learning by Design*, this approach seems to be the most appropriate instructional framework for the development of this population of learners' multiliteracies in Spanish.

Learning by Design

The Multiliteracies framework *Learning by Design* was first implemented in Australia in 2000 (Cope and Kalantzis 2015), and it has been subsequently applied to various projects in that country. The main premise guiding this approach is the idea that formal (i.e., academic) learning needs to integrate the "informal" learning (i.e., experiences) that permeates learners' personal lives. Kalantzis and her colleagues (2005, 40) believe this is particularly important in today's globalized and technology-based society, where "more is being learned in the domain of informal learning, and learners seem to be finding that domain more relevant and more engaging." These researchers suggest that the traditional methods found in formal education (e.g., question-answering exchanges between instructors and students, multiple-choice activities, or traditional exams) do not reflect the kind of reality and learning that students experience in their everyday life. Thus, they propose the integration of both kinds of learning, formal and informal.

In order to achieve this goal, the point of departure is the need to develop curricula that, first of all, are based on relevant materials that connect closely to who the learners are—to their personal world, including the community to which they belong—by taking into account their diverse social and cultural backgrounds. This is what Kalantzis and her

colleagues (2005) call *belonging*, which emphasizes the need for an instructional environment to which learners can connect at a deep, personal level and to which they feel they "belong." Another important element in the kind of pedagogical model promoted by *Learning by Design* is learners' depth of involvement and engagement in their learning process. That is, in order for learning to broaden learners' knowledge in effective and life-long ways, it needs to result in a process of *transformation* (Kalantzis et al. 2005). For this transformation to take place, it is necessary to "take the learner into new and unfamiliar terrains. However, for learning to occur, the journey into the unfamiliar needs to stay with a zone of intelligibility and safety. At each step, it needs to travel just the right distance from the learner's lifeworld starting point" (Ibid., 51).

Another important element in the *Learning by Design* approach is the process of learning itself. In the curriculum model developed by Kalantzis and Cope (2010, 2012), learning is interpreted as involving four knowledge processes—*experiencing*, *conceptualizing*, *analyzing*, and *applying*, and "as a dynamic process of discovering form-meaning connections through the acts of interpreting and creating written, oral, visual, audio-visual, and digital texts" (Paesani et al. 2015, 23). These four processes of discovery mirror those that are present in informal learning, and in formal learning, they are embedded in instructional activities that allow learners to do the following: (1) experience known and new meanings (departing from known concepts and experiences and moving forward to explore new situations and/or information); (2) conceptualize meanings by naming (grouping into categories, classifying, defining) and with theory (formulating generalizations and establishing connections among concepts as well as developing theories); (3) analyze meanings functionally (focusing on structure and function, establishing logical connections) and critically (evaluating different perspectives, interests, and motives); and (4) apply meanings appropriately (engaging in real-life applications of knowledge) and creatively (applying new knowledge in innovative and creative ways) (Kalantzis and Cope 2010, 2012).

What transpires from the characterization of learning in *Learning by Design* presented in the previous three paragraphs is that, for learning to take place, it is important to develop a transformative curriculum, which will "[take] students from their lifeworld experiences [the point of

departure] to deep [and new] knowledge, understandings and perspectives" (Bruce et al. 2015, 82). This type of curriculum will also have to be based on instructional materials that can guide learners through the four knowledge processes and expose them to what Serafini (2014) calls *multimodal ensembles*—the many forms of representation to which we resort to convey meaning, and which can present different perspectives and depictions of particular themes. This feature is of extreme importance because it enables *synesthesia*, the process by which learners can gain a deep understanding of an issue by looking at what it means from the various angles made possible by its representation in different modes (Cope and Kalantzis 2009b; Jones and Hafner 2012; Kalantzis and Cope 2012). *Learning by Design* also relies on the inclusion of multimodal ensembles as instructional resources to provide learners with the opportunity to be exposed to and work with the breadth and depth of genres that are available in today's world. This, in turn, allows for learners' understanding of the social function and structure (organization and linguistic features) of texts belonging to specific genres with the goal of producing similar products, which is essential for learners' multiliteracies development (Cope and Kalantzis 1993; Hyland 2014). That is, in order to become "multiliterate," students need to be active participants in a learning process based on their in-depth interaction with a variety of multimodal texts, connected to their world experiences, and in which "knowledge processes move from known to unknown and aid concept building, theorizing functional [language-based], and critical analysis… as well as appropriate and/or transformed application" (Hepple et al. 2014, 221).

Two excellent examples of the principles of *Learning by Design* at work in Australia are the project "Becoming Asia Literate," carried out in the year 2010 (Bruce et al. 2015), and a more recent claymation initiative involving students from minority groups (Hepple et al. 2014). The first project consisted of eight instructional modules that reflected the tenets of *Learning by Design*, and combined resources (based on authentic sources) the focus of which was the teaching of diverse aspects of Asian studies, such as art, geography, history, and Japanese, among others. The modules "included 'conceptual' learning to develop deep knowledge [of the content presented], and 'analytical learning' to

develop deep understanding by challenging stereotypes, examining a range of perspectives, and developing informed attitudes and values of tolerance" (Bruce et al. 2015, 83). Eight hundred and ten students in 35 elementary school classes ranging from kindergarten to seventh grade participated in the project. The in-depth analysis of samples of students' work in different grades revealed that instruction anchored in *Learning by Design* had been a catalyst for learners' changes in cultural attitudes, their growth in literacies, knowledge, and understanding, and their higher levels of motivation as compared to more traditional instructional approaches.

More recently, *Learning by Design* projects have been successfully implemented in high school classrooms in Australia for the development of second language (L2) multiliteracies in students from minority groups. For example, Hepple et al. (2014) reported on a digital media project in which 11 immigrant high school students in an L2 post-beginner English class in Australia created claymation representations of the novel "The Big Wave" and the movie "Jurassic Park." Students were first exposed to the story and movie, and were then asked to apply claymation and digital resources to produce a movie for each of them with scripts that included narration and dialogue, which the learners were then required to record as the audio for their representations. The main goal of this project was to foster students' literacies in English by enabling them to work with multimodal resources that would strengthen their reading, speech, comprehension, writing, and visual literacies by analyzing (social and functional purpose and linguistic/non-linguistic structure), discussing, interacting with, and producing different multimodal representations. The researchers described how students' participation in the claymation project successfully promoted their collaborative construction of knowledge, facilitated their use of English to create the scripts and narration that they incorporated into their stories, and resulted in learner agency. They also believed that the success of the project was connected to the *Learning by Design* tenets that guided their instructional activities, as they resulted in a "transformative…approach to literacy based on student-led, generative, joint activities supported by strategic assistance, rather than the traditional 'remediation' practices of pre-planned, scripted, generic practice of basic skills" (Ibid., 227).

In a review article of *Learning by Design* projects implemented in different Australian classrooms with minority students, Mills (2010) also highlighted the pedagogical benefits of the framework, particularly when it is paired with digital media. For example, the researcher focused on the integration of digital tools such as blogs and web pages to instruction with the objective of exposing young learners to different kinds of multimodal ensembles, and of guiding them through their journey from what was known to what was new. Even though the article did not provide specific data, it offered examples of how different elementary school instructors worked with multimodal media in the four knowledge processes, and how their students' work materialized in creative, multimodal applications of the content to which they had been exposed.

The hybrid projects discussed by Mills (2010) also showed how some L2 English students found their individual voices in that language, and were able to express themselves more effectively than with more traditional means. That was the case of Jao, an eight-year-old who had immigrated to Australia from Thailand and, at the time of the study, had been in the country for only two years. Prior to his experience with the *Learning by Design* curriculum, Jao had found it difficult to participate in whole-class activities and to communicate his ideas in writing. A hybrid webpage project provided this learner with the opportunity to overcome some of his difficulties, as he was able to express himself with resources that went beyond oral discourse and printed text. Jao's page included a variety of multimodal elements such as photos, personal statistics, and text, and through this combination, he overcame the communicative limitations of printed text and oral discourse, and he found his "voice." This account evinced how curricula guided by the tenets of *Learning by Design* can accommodate "learners' unique identities… in learning encounters, curriculum content and settings in ways that connect their lived experience with what is being taught" (Neville 2008, 25).

The projects presented above show how the application of materials and tasks based on the *Learning by Design* framework can be successfully implemented in classrooms for the development of minority students' L2 literacies and the teaching of a variety of subjects related to specific topics (e.g., Asian studies, as in the "Becoming Asia Literate" project). The use of different ensembles that are connected to students' personal experiences

and/or those of their families/communities makes culturally relevant pedagogy possible. It also allows for synesthesia, as learners work with different kinds of genres and non-linguistic ensembles associated with a variety of subjects, and they analyze their social function, structure, and linguistic/non-linguistic meaning-making resources. Learners then develop their own personal projects, collaborating with their classmates and expressing their identity and newly gained knowledge in what Cope and Kalantzis (2009b) defined as the "re-voicing" of that knowledge.

The successful implementation of curricula based on the tenets of *Learning by Design* in programs designed for minority students in elementary, middle, and high school classes in Australia suggests that this kind of pedagogy could guide the teaching of Spanish to another group of minority learners, Spanish heritage language learners in university classes in the United States, who constitute the focus population of this book. However, before we can establish connections between the framework and heritage students, it is important to discuss who these students are.

Spanish Heritage Language Learners in the United States

The phrase "heritage language learner" was first introduced by Valdés (2000, 1) to refer to a student "who is raised in a home where a non-English language is spoken. The student may speak or merely understand the heritage language and be, to some degree, bilingual in English and the heritage language." Since its introduction, this definition has been widely used by both researchers and educators interested in bilingualism and heritage language education because it captures the bilingual proficiency continuum that can manifest in this population of learners, particularly in the case of heritage Spanish in the United States. That is, according to Valdés, heritage students can exhibit differing proficiency levels in their heritage language, ranging from receptive to advanced communication skills, and this is connected to the kind of exposure they have had to their heritage language. In this book, Valdés's definition of heritage language learners will be adopted in regard to Spanish heritage language learners (SHLLs), the focus of the present volume.

In the last 15 years, a large number of studies with SHLLs in the United States (for comprehensive reviews, see Montrul 2012 and Zyzik 2016) have established that these learners are usually second- or third-generation immigrants who grow up in monolingual Spanish or bilingual Spanish-English households (in which one or both parents speak Spanish). In these situations, they are exposed to Spanish or both English and Spanish from birth or before the age of five, but receive most or all of their schooling, subsequently, in English. Their knowledge of Spanish is, therefore, mostly implicit, and not metalinguistic. In addition, since most SHLLs have learned Spanish in informal family settings, they might also display limited knowledge of different Spanish registers, and they might have poor or no literacy skills (Benmamoun et al. 2013; Colombi 2003; Montrul 2010, 2012; Valdés 2000, 2006). That is, even when SHLLs can use Spanish fluently, they might not have explicit knowledge of how this language functions to convey specific meanings in different kinds of texts, which is an essential aspect of literacy. Another important characteristic of SHLLs reported in the literature is their bilingual/bicultural identity: the ties that they might have to their Hispanic community, and how these ties might have influenced who these speakers are and the way in which they relate to the world. Based on research findings that have supported the social, cultural, and linguistic aspects discussed above, Zyzik (2016, 27) proposes a "prototype model of heritage language learner," comprising the following: proficiency (listening and speaking)[3] in the heritage language, ethnic/cultural connection to the heritage language, dominance in a language other than the heritage language, implicit knowledge of the heritage language, some level of bilingualism, and early exposure to the heritage language in home environment. This prototype summarizes what is known about these learners and can provide a point of departure for the development of pedagogical material to teach them their heritage language.

The need for pedagogical material for the teaching of Spanish as a heritage language arises from comprehensive studies that have focused on the social, academic, and linguistic situation of Spanish heritage learners (e.g., Lukes 2015; Montrul 2010, 2012; Thomas and Collier 2002; Valdés 2006). This work has shown us that the lower rates of academic success at the high school and university levels that these learners often

display in comparison to students belonging to other ethnicities are connected to their insufficient higher-level literacy skills in both their first and second languages (Spanish and English, respectively). This is critical because a strong body of recent research (e.g., Bylunda et al. 2012; Creese and Blackledge 2010; Cummins 2009; Thomas and Collier 2002) has "reveal[ed] a compelling link between strengthening students' first language and enhancing their acquisition of English" (Lukes, 148–149). Indeed, in his review of studies highlighting the beneficial effects of Spanish instruction for the strengthening of heritage learner's L2, English, Cummins (1984, 43) states that "Spanish instruction that develops first language… skills for Spanish-speaking students is not just developing Spanish skills, it is also developing deeper conceptual and linguistic proficiency that is strongly related to the development of English literacy and general academic skills." In addition, other recent work (e.g., Agirdag 2014; Gandara and Contreras 2009) has linked balanced bilingualism among heritage learners with economic success. It is therefore essential to help those who are in such linguistically disadvantaged situations by creating practical, theoretically sound, and accessible pedagogical material that will strengthen literacy skills in their first language, which, in turn, can help improve literacy skills in their second language.

Even though there is no shortage of (often expensive) printed material whose main objective is the teaching of Spanish to heritage learners at the university level, most of the available resources rely on teaching methods that are more appropriate for learners whose first language is English, not Spanish. Indeed, studies that have mirrored some of the methodologies on which these textbooks are based (e.g., processing instruction and output-based approaches) have shown that these types of pedagogical interventions are not effective enough for the development of heritage learners' metalinguistic knowledge (see Bowles 2011; Bowles et al. 2014; Potowski et al. 2009), an essential aspect of literacy. The main problem with these approaches is that they rely on explicit methods of language analysis and on metalinguistic knowledge, which heritage learners lack (Montrul 2010). Another flaw of this type of material is that it only promotes a limited and traditional idea of literacy, based on the teaching of grammar rules and their "correct" application, but does not develop other literacies. That is, learners are not given the opportunity to work with

Spanish in ways that reflect today's diverse ways of making meaning: They are not able to develop the metalinguistic skills needed to understand how multimodal ensembles (those that go beyond printed texts and can combine, for example, visual images, interactive media, writing, etc.) work nor are they guided to produce them.

Existing research (Carrasco and Riegelhaupt 2003; Ducar 2006; Valdés 2006) has also shown that the existing printed pedagogical material is often based on general, and sometimes stereotypical, information on Hispanics, their linguistic varieties, and Latin America. Instead, what is needed is a comprehensive body of pedagogical resources that purports to address who heritage learners are [Zyzik's (2016) prototype], that should encompass materials that are first and foremost culturally relevant, "[that] empower[s] students intellectually, socially, emotionally, and politically by using cultural referents to foster [appropriate] knowledge, skills, and attitudes" (Ladson-Billings 1994, 18), and will, as a result, "provide a way for students to maintain their cultural integrity while succeeding academically" (Ladson-Billings 1995, 476). The mission is then to offer learners the tools to develop the traditional literacy skills expected in the academic environment in socially and linguistically framed dynamic ways, while, at the same time, promoting the development of those multiliteracies that will result in the understanding and production of other kinds of multimodal forms of expression through which learners can express their individual and community identities in Spanish.

Instructional material for the development of SHLLs' multiliteracies also needs to be commensurate with the implicit knowledge of Spanish that they bring to class. This can be achieved by guiding their active construction of knowledge of Spanish through the in-depth analysis and understanding of the social and cultural meanings conveyed by different kinds of multimodal—written, oral, visual—texts developed by members of their Hispanic community(ies). In addition, materials should "establish form-meaning connections [by attending] to the written, verbal, and visual form of a text [and] the text's [linguistic] structure and organization" (Paesani et al. 2015, 23). This type of material will promote (1) the establishment of connections between what is known by students (e.g., topics that are relevant to their life, academic experience, and community) and new (related) material that presents new outlooks on that

knowledge; (2) guided, in-depth comprehension activities that allow for critical thinking and conceptualizations of linguistic and discursive elements (imperative for multiliteracies development); and (3) tasks that require students to actively apply new concepts to accomplish specific outcomes that are directly related to their present and future personal and academic needs.

The realization of these goals needs to be grounded in a pedagogical framework that can provide us with the appropriate theoretical basis and instructional tools to materialize them. That is, it is important to offer learners personally and culturally relevant materials that will develop their literacies by guiding their understanding of "the different forms texts take with variations of social purpose, [with the analysis of] the formalities of how texts work [and] the living social reality of [their] use" (Kalantzis and Cope 2012; Kindle location 2616). This type of instruction will also foster what Martínez (2016, 47) calls SHLLs' "capabilities," which will not only result in "developing individual learners [in accordance to their personal needs, but also] impacting their communities." We believe that methodology is *Learning by Design* (Kalantzis and Cope 2010, 2012; Kalantzis et al. 2016).

Learning by Design and Heritage Language Pedagogy

Based on the information presented in the previous sections of this chapter, we believe *Learning by Design* can offer a theoretical and methodological blueprint for the type of curricula (i.e., content, instructional resources, teaching/learning processes, and involvement with the community) that would benefit heritage language learners. First and foremost, the framework bestows great importance to the idea that if productive learning is to happen, it cannot be based on a one-fits-all model: It has to be *designed* according to each individual learning situation, to "engage with the specifics of individual and group identities" and to "take [those specific learners] into new places, and along this journey, act as an agent of personal and cultural transformation" (Kalantzis et al. 2005, 46–47). Since, as proposed by Valdés's (2000) and Zyzik's (2016)

prototype, SHLLs in the United States are not a homogeneous group in terms of linguistic proficiency, cultural background, and lifeworld experiences, the type of personalized curriculum proposed by *Learning by Design* would answer the specific needs of different groups of students, as it will be seen in the remaining chapters of this volume.

Another important concept put forward by the *Learning by Design* framework is the idea of developing learners' multiliteracies through the incorporation of multimodal instructional resources and tasks that require learners to produce multimodal ensembles. In order to develop a curriculum that would foster the development of SHLLs' multiliteracies, instructors could resort to digital media, which would not only be a very suitable source of linguistically and culturally rich multimodal ensembles, but would also offer the tools to create open source materials tailored to answer the needs of specific populations of heritage language learners (Cope and Kalantzis 2009b; Zammit 2010). That is, the almost endless myriad of available digital resources would facilitate instructors' access to ensembles produced by members of specific cultural communities, and this access would give teachers the opportunity to build materials with which "students [would] have more opportunities to see themselves represented…rather than attempting to find a fit between themselves and the contexts represented by textbook publishers" (Smolin and Lawless 2009, 177). The development of culturally relevant materials that connect closely with who the learners are and what they need both personally and academically could enhance and simplify the learning process by linking "the particularities of their life experiences closely into the knowledge that is being made, [and] by this means, their knowledge making [would become] re-voicing, [and] not replication" (Cope and Kalantzis 2009b, 98).

Learning by Design also offers the opportunity to guide SHLLs' learning process in a way that is commensurate with their implicit knowledge of Spanish. That is, the four knowledge processes in the framework allow for a slow-paced introduction to new knowledge, departing always from the learner's known world and meaning (experiencing the known), and moving toward new content through a guided metalinguistic and conceptual analysis that can help learners understand the connections between meaning and form. Learners can then be directed in the

application of the newly learned concepts and their understanding of how linguistic and non-linguistic resources work when conveying different kinds of meaning and perspectives in multimodal materials. In addition, the framework also promotes learners' collaborative construction of knowledge (Kalantzis et al. 2016), which can act both as a learning resource (i.e., learners' exposure to different lifeworld views and experiences from their own) and also as a cognitive tool to aid learners in the completion of certain tasks that would be too difficult to tackle individually. This type of learning could be beneficial in an instructional program for SHLLs because it would allow students to deploy their cultural and linguistic knowledge resources to assist one another in their learning process, and would provide them with the opportunity to compare and contrast lifeworld experiences.

The theoretical underpinnings of *Learning by Design* translate into a variety of knowledge-based tasks and practical activities that can be implemented in the kind of transformational curriculum advocated by the framework. These activities, presented in Table 1.1 and based on Kalantzis and her colleagues' work (2005, 113–114; New Learning: Transformational Designs for Pedagogy and Assessment 2015), mirror each of the four knowledge processes, and could be effective for the teaching of Spanish to SHLLs. That is, the activities depart from the kind of implicit knowledge these students bring to class, and then proceed, in a slow-paced process of guidance, toward the development of explicit metalinguistic knowledge for the understanding of the connections between meaning and form (they ways in which meaning is expressed) in order to achieve, as a final result, learners' effective application of new concepts in appropriate and creative ways.[4]

As will be seen in the remainder chapters of this volume, the practical approaches to knowledge and the tasks associated with them (presented in Table 1.1.) have already been successfully implemented in different initiatives with not only heritage language learners, but also heritage language instructors. For example, Chaps. 2 and 3 describe two similarly successful pedagogical projects, but with very different student populations. In Chap. 2, "Designing a Comprehensive Curriculum for Advanced Spanish Heritage Learners: Contributions from the Multiliteracies Framework,"

Table 1.1 Sample instructional applications for each knowledge process

Knowledge processes	Sample instructional applications
Experiencing	**Learning activities focused primarily on personal knowledge, concrete experience, evidence, data**
Experiencing the known	*Instructional focus*: Learners' lifeworld experience, prior knowledge, community background *Instructional tasks*: Analyze (meaning), associate, brainstorm, check, clarify, exemplify, identify, locate, predict, recall, reflect and connect, retrieve *Resources*: Images (e.g., photography, art, video excerpt), quotes, word clouds, concept wall, data chart, title of multimodal ensemble/text to be discussed
Experiencing the new	*Instructional focus*: Introduction to new knowledge. Immersion in new content, experiences, and community settings which connect to the learner to the extent that the new makes enough sense for learning to occur. *Instructional tasks*: Comprehend and interpret (guided description, examination, perception, inference; sample activities: chart completion, spider map, jigsaw reading, web of wonder), compare and contrast (experiences—known with new), restate (e.g., read and retell, summarize), verify (connections among experiences—known and new) *Resources*: Multimodal ensembles, printed texts illustrating different genres and thematically connected to the known
Conceptualizing	**Learning activities focused primarily on abstract concepts and theoretical synthesis**
Conceptualizing by naming	*Instructional focus*: Analyzing how the sample instructional element works (i.e., the structure and organization of information in multimodal ensembles/printed texts belonging to different genres). Defining and applying concepts. First connections between meaning and form *Instructional tasks*: Analyze how meaning is expressed in instructional sample (connect, classify, define, give examples; sample activities: affinity diagrams, comparison charts or matrices, character profile, spider map, concept organizer, Frayer Model, information text pyramid, inquiry charts, Venn diagram) *Resources*: Multimodal ensembles/printed texts illustrating different genres and thematically connected to the known presented in "experiencing the new." These are the basis for students' in-depth analysis of connection between meaning and form

(*continued*)

Table 1.1 (continued)

Knowledge processes	Sample instructional applications
Conceptualizing with theory	*Instructional focus*: Linking concepts examined in "conceptualizing by naming" into a language of generalization, or visual representation of conceptual relations *Instructional tasks*: Abstract, define, generalize, hypothesize, map, model, organize, overview, structure, synthesize. Sample activities: cause and effect pattern organizer, fishbone concept map, flow diagram, mind map, taxonomy *Resources*: The analysis of the multimodal ensembles/printed texts illustrating different genres and thematically connected to the known presented in "experiencing the new" acts as the sample for generalizations on the genre they represent. Based on the in-depth analysis of the sample, learners develop conceptual generalizations
Analyzing	**Learning activities focused primarily on analyzing and interpreting functions, interests, and perspectives in knowledge**
Analyzing functionally	*Instructional focus*: Analyzing how linguistic/non-linguistic features work to express specific meanings in the sample instructional element (i.e., multimodal ensembles/printed texts belonging to different genres). Identifying role and function. What does it do? How does it do it? *Instructional tasks*: Analyze how meaning is expressed in instructional sample, focusing on linguistic/non-linguistic features (compare and contrast, connect, deconstruct, interpret) *Resources*: Modifications of sample multimodal ensembles/printed texts to guide learners' attention to linguistic/non-linguistic features: Text enhancement, highlighting of visual elements (e.g., increasing their size, framing)

(*continued*)

Table 1.1 (continued)

Knowledge processes	Sample instructional applications
Analyzing critically	*Instructional focus*: Analyzing purposes and human intentions involved in knowledge. Who is the multimodal ensemble/printed text for? Interpreting personal and cultural perspectives involved in knowledge. What point of view does it represent? *Instructional tasks*: Appraise, argue, assess, conclude, critique, deconstruct, differentiate, distinguish, evaluate, infer, interpret. Sample activities: analytical lenses (analysis through different "perspective lenses"), camper, debate, polling, point of view interviews, comparison of perspectives through the introduction of other ensembles (e.g., art, cartoons, poems) with the same thematic focus *Resources*: Sample multimodal ensembles/printed texts for analysis of connections between content and authors' views and objectives—focus on audience, intention, values, issues of power
Applying	**Learning activities focused primarily on applying knowledge, creating meanings, and making a practical impact on the world**
Applying appropriately	*Instructional focus:* Applying new knowledge to produce a similar multimodal ensemble/printed text to the one presented as sample *Instructional tasks:* Apply, generate, implement, justify, plan, produce, reconstruct, solve, use. Sample Activities: productive activities (multiliteracies applications) *Expected outcome:* Appropriate application of new knowledge in a productive activity
Applying creatively	*Focus*: Creating new knowledge; taking knowledge from one or more settings, and adapting it to a different setting *Instructional tasks*: Construct, create, design, imagine, invent, transfer, translate *Expected outcome*: Extension of new knowledge in a productive, but creative activity (e.g., combining multimodal modes in the production of a hybrid ensemble)

Adapted from Kalantzis et al. (2005, 113–114) and online information (New Learning: Transformational Designs for Pedagogy and Assessment 2015)

Parra and her colleagues describe the curriculum design and results of an advanced college level course for Spanish heritage students at Harvard University based on the tenets of *Learning by Design*. The goal of this class was to strengthen students' oral and written Spanish skills and to develop their sociocultural and linguistic awareness. The authors provide a detailed description of the different instructional elements in the curriculum, and analyze the results of its implementation based on the participants' initial and final self-evaluations, the tracking of their reading progress, their multimodal art projects, and their written reflections on the meaning of Spanish in their lives. The results of this work show the benefits of the framework used for the strengthening of the participating heritage learners' Spanish as well as for their personal growth and reaffirmation of their ethnolinguistic identity.

Chapter 3, "The Role of Digital, *Learning by Design* Instructional Materials in the Development of Spanish Heritage Learners' Literacy Skills," by Zapata, reports similar positive results. The author discusses the application of *Learning by Design* for the development of open source instructional materials for the teaching of Spanish as a heritage language (HL) at an intermediate level. Twenty-nine students in an intermediate heritage Spanish class in an American Hispanic-serving university participated in this study. Throughout the course of a semester, they produced a variety of written and multimodal hybrid texts belonging to different genres, some of which became the data for this study. In addition, the participants also completed pre- and post-questionnaires that probed into the development of their metalinguistic knowledge. The results of this work show promising growth in the participants' level of literacy and some development of their metalinguistic awareness.

The next two chapters, Chaps. 4 and 5, focus on two projects based on SHLLs' work in classes that incorporated elements of Spanish for Specific Purposes and Community Service Learning. Martínez and San Martín in Chap. 4, "Language and Power in a Medical Spanish for Heritage Learners Program: A *Learning by Design* Perspective," introduce digital storytelling from the perspective of *Learning by Design*, as a "designing" process in which students engage in "weaving" the knowledge processes of experiencing, conceptualizing, and applying. The authors also focus on the

effectiveness of this tool in a heritage language program for students in the health sciences and show how its use elevates and brings into focus the humanities dimensions of heritage language education.

Chapter 5, "Community Service Learning, *Learning by Design*, and Heritage Learners: A Case Study," by Ruggiero, considers the impact of service learning as a means to build and reinforce SHLLs' language abilities while allowing for meaningful engagement with local communities, through the discussion of a project grounded in the *Learning by Design* framework. The chapter describes a service learning course at the University of Memphis which involved SHLLs' collaboration with Spanish-speaking local community leaders and artisans to develop and implement self-sustaining projects centered on the arts. Learners documented their experience in a multimodal journal that included digital storytelling, written reflections, and self-generated questions for critical inquiry. The analysis of this work suggests that the students not only experienced linguistic gains, but also an increase in their confidence as Spanish speakers.

In Chap. 6, "Positional Identities, Access to Learning Opportunities, and Multiliteracies: Negotiations in Heritage and Non-Heritage Spanish-Speaking Students' Critical Narratives," Kayi-Aydar focuses on a not-often-studied population: graduate students. Grounded in Positioning Theory and the *Learning by Design* framework, this chapter explores the complex relationships among positional identities, access to learning opportunities, and the development of professional multiliteracies in a doctoral program. Based on her analysis of autobiographical narratives, collected through life history interviews that focused on the participants' socio-historically situated experiences while being students, the author provides insights into the struggles, accomplishments, and identities of heritage language learners who are to become Spanish language teachers or university faculty members, and how their experiences differ from those of their non-heritage Spanish-speaking peers.

In Chaps. 7 and 8, the focus shifts to HL instructors. In Chap. 7, "Heritage Language Development of Pre-service Bilingual Teachers: How a Practice-Situated Intervention Promoted Multiliteracy," Grosso Richins and Hansen-Thomas introduce a project designed to foster bilingual education

teacher candidates' existing language literacies in Spanish. The program incorporated the tenets of *Learning by Design*, with the objective of establishing a linguistic intervention that would engage heritage teacher candidates in a transformational process that would allow them to develop new literacies and meanings in Spanish. The vehicle was a set of multimodal learning experiences based on the candidates' available designs (literacies in Spanish and English, pedagogical knowledge, and life experiences) transferred to their teaching practice.

Chapter 8, "Multiliteracies Pedagogy and Heritage Language Teacher Education: A Model for Professional Development," by Lacorte, introduces a model of professional development for pre- and in-service instructors of heritage language learners based on a combination of (a) key linguistic, cultural, and social concepts and skills; (b) a sociocultural theoretical perspective that puts emphasis on creating opportunities for teachers to move toward more theoretically and pedagogically sound practices; and (c) a multiliteracies approach focused on the expansion of learners' resources for making meaning through multiple modes of language use. This chapter aims to develop in-depth understanding of instructors' concrete practical experiences as learners of language in academic environments and/or in the everyday world; of the research and pedagogical principles generated in a range of academic and professional areas; and of social, cultural, and ideological issues related to heritage language education.

The final chapter of this volume, Chap. 9, "Concluding Remarks," by Lacorte, revisits the studies presented in the volume, focusing on their unique contributions to the field of heritage language pedagogy and the key concepts introduced in each work.

The projects presented in this volume support the proposal put forward in this introductory chapter: Indeed, *Learning by Design* can effectively guide the development of heritage language learners' multiliteracies in Spanish. The main principles behind this approach, *belonging* and *transformation*, as well as its four knowledge processes, offer the kind of guidance and flexibility of content and instruction that can address the needs of different populations of heritage language learners. We expect that the work introduced in the following chapters will act as the impetus for a new era in heritage language pedagogy.

Notes

1. For a more detailed account on the development process behind the pedagogy of Multiliteracies, and the changes that ensued in the years following its introduction, see Cope and Kalantzis (2009a).
2. Unfortunately, to the best of the author's knowledge, no studies have offered data on the implementation of *Learning by Design* in the American context (e.g., Kalantzis et al. 2016 described some initiatives, but did not provide data). The existing work is either based on the original tenets of the pedagogy of Multiliteracies (i.e., those developed by the New London Group in 1996; see, for example, Danzak 2011 and Angay-Crowder et al. 2013) or of a theoretical nature, proposing, for example, the framework as guidance for the development of pedagogical content for the teaching of L2 Intermediate Spanish (e.g., López-Sánchez 2016).
3. Zyzik (2016) only includes listening and speaking in her prototype due to the lack of formal instruction (which would include writing and reading) in the heritage language that characterizes most heritage language learners. To propose this conceptualization, she relies on Hulstijn's (2011) concept of basic-level cognition (BLC), which "is limited to listening and speaking (it does not comprise reading or writing) and subsumes all the high-frequency lexical items and frequent grammatical constructions that are used in routine, everyday conversations" (Zyzik, 21). And it is this type of proficiency that has often been reported in the literature (e.g., Montrul 2012).
4. The activities presented in Table 1.1 are samples. For more pedagogical suggestions, we recommend consulting the "Knowledge Processes" section on the *Learning by Design* website (http://newlearningonline.com/learning-by-design).

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