



# Social Networking Sites for Language Learning: Examining Learning Theories in Nested Semiotic Spaces

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Redes sociales para el aprendizaje de idiomas: un examen a las Teorías de Aprendizaje en espacios semióticos anidados

Redes sociais para o aprendizado das línguas: uma revisão das teorias de aprendizagem em espaços semióticos aninhados

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## Origen del artículo

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## Abstract

Social media has given rise to a new generation of participatory online environments, namely, social networking sites for language learning (SNSLL). SNSLLs have created new patterns of learning languages, social interaction, and learning experiences. This study focuses on Busuu, a well-known SNSLL, and examines the views of learning that underlie the semiotic design of this virtual environment. I depart from the premise that the semiotic composition of any medium of communication positions and enacts certain ways in which contents must be treated, acquired, or learned. I draw on methodological and theoretical foundations of ethnographic research and multimodal social semiotics to analyze the website. One of the main findings of the study indicates that Busuu constitutes an ecological system of nested semiotic spaces where pedagogical elements and principles from different theories of language learning (behavioristic, cognitive, constructivist) interweave in conflicting but at the same time complementary ways.

**Keywords:** Busuu; multimodality; Computer Assisted Language Learning; Computer-Mediated Communication; theories of learning; social networking sites for language learning (SNSLL)

## Resumen

Las redes sociales para el aprendizaje de lenguas (RESAL) han creado nuevos modelos de aprendizaje, de interacción social y de experiencias de aprendizaje. Este estudio se centra en Busuu —una RESAL bastante conocida— y examina las perspectivas de aprendizaje que subyacen al diseño semiótico del mismo. El artículo parte de la premisa según la cual la composición semiótica de cualquier medio de comunicación posiciona y promulga ciertas formas de tratamiento, adquisición y aprendizaje de los contenidos, y se basa en fundamentos teóricos y metodológicos de la investigación etnográfica y la semiótica social multimodal para analizar el sitio web. Una de las principales conclusiones del estudio indica que Busuu constituye un sistema ecológico de espacios semióticos entrelazados, donde los elementos y principios pedagógicos de las diferentes teorías del aprendizaje de lenguas —conductista, cognitiva, constructivista— se amalgaman de manera conflictiva y, al mismo tiempo, complementaria.

**Palabras clave:** Busuu; multimodalidad; aprendizaje de lenguas asistido por computador; comunicación mediada por computador; teorías del aprendizaje; redes sociales para el aprendizaje de lenguas (RESAL)

## Resumo

As redes sociais para aprendizagem de línguas (RESAL) criaram novos modelos de aprendizagem, de interação social e experiências de aprendizado. Este estudo centra-se em Busuu —uma RESAL muito conhecida— e examina as perspectivas de aprendizagem que subjazem no seu design semiótico. O artigo parte da premissa segundo a qual a composição semiótica de qualquer meio de comunicação posiciona e promulga certas formas de tratamento, aquisição e aprendizagem dos conteúdos, e baseia-se em fundamentos teóricos e metodológicos da pesquisa etnográfica e a semiótica social multimodal para analisar o site. Um das principais conclusões do estudo é que o Busuu constitui um sistema ecológico de espaços semióticos entrelaçados onde os elementos e princípios pedagógicos das diferentes teorias de aprendizagem de línguas —conductista, cognitiva, construtivista— se amalgamam de maneira conflitante e, por sua vez, complementar.

**Palavras-chave:** Busuu; multimodalidade; aprendizagem de línguas assistida por computador; comunicação mediada por computador; teorias de aprendizagem; redes sociais para aprendizagem de línguas (RESAL).

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# Social Networking Sites for Language Learning: Examining Learning Theories in Nested Semiotic Spaces

## Introduction

Language teaching and learning have not been immune to the new patterns of mobility and immigration that have become more fluid and complex in the era of social media. The transnational connections that computer mediated interaction afford “make possible ‘texts’, ‘relations’ and ‘actions’ that, previously, simply did not exist” (De Saint-Georges, 2013, p. 1). By redefining material conditions, social arrangements, and the communicational landscape, participatory online environments have pressed the field of Computer Assisted Language Learning (CALL) and Computer Mediated Communication (CMC) to expand the research palette on computers and language learning (Kern, 2006; Arnold & Ducate, 2006; Blyth, 2008; McBride, 2009; Zourou, 2013). Social media has given birth to several participatory online environments that generate new patterns of learning languages and varied learning experiences. Most of these digital environments rely heavily on social networking affordances (Boyd & Ellison, 2008; Lankshear & Knobel, 2008; Lomicka & Lord, 2009; McBride, 2009; Blake, 2013), as is the case of sites for language learning such as Busuu, Livemocha, Palabea, Lang-8,

and Voxswap. These social networking sites for language learning (SNSLL) have appeared on the language teaching scene since 2007, raising a myriad of questions concerning their use and efficiency for language teaching and learning.

A review of the modest amount of research on SNSLLs indicates that, although several studies have looked into their capabilities to enhance language learning (Lin, 2012; Chotel, 2012; Lloyd, 2012), little attention has been given to their semiotic design and their impact on shaping and embodying particular views of learning. Inquiring about the philosophies underlying participatory online environments is necessary if we are to understand language teaching and learning dynamics and their relationship to the semiotic affordances of SNSLLs (Brick, 2011a, 2011b; Lin, 2012). However, the study of new language learning interfaces and their processes of meaning-making calls for a transdisciplinary approach. Kern (2006), for example, proposes that computer mediated communication (CMC) enrich its methodological and theoretical foundations by drawing on ethnographic research methodologies and semiotic theories. Other scholars, on the other

hand, advocate for models that permit the examination of language and learning in a more heuristic and comprehensive way (Van Lier, 2004; Lam & Kramersch, 2003; Lafford, 2009). Lastly, CALL/CMC has made significant strides in enlarging the scope of interactional and sociocultural approaches (Blyth, 2008; Reinhardt, 2012) with the intersection of semiotic theories and ecological views of language. Taken together, these different frameworks that inform CMC illuminate the theoretical and methodological choices made in this study since it bases its analysis on multimodal social semiotics (Van Leeuwen, 2005; Baldry & Thibault, 2006; Jewitt, 2009; Kress, 2010) and ecology of language (Van Lier, 2003, 2004; Lam & Kramersch, 2003).

One relevant reason to turn our attention to SNSLLs is their apparent lack of informed theoretical and pedagogical principles, as established in previous research (Brick 2011a; Jee & Park, 2009; Liaw, 2011). In particular, looking at the ways language learning is conceptualized and materialized through the affordances of language learning websites could shed light on the design of online materials and in general curriculum development.

In fact, as Richards and Rodgers (2001) have insisted, the assumptions and beliefs about learning should be the point of departure for language curriculum and should be consistent with the type of syllabus, the objectives of the instructional method, the roles of the students and teachers, materials, and teaching procedures. Following this line of argument, this case study focuses on Busuu, one of the most well-known SNSLLs, and intends to answer the following research question: What are the views of learning that underlie the semiotic design of Busuu? Next, we present the theoretical and methodological frameworks adopted, followed by the methods and the results, with interpretation and discussion interspersed.

### Social Networking Sites for Language Learning

Language learning websites such as Busuu are distinguished from other online environments by the fact that they afford social *networking*<sup>1</sup>. On these sites members of the community engage in practices of networking by connecting with people from their own or other cultures with whom they typically do not have any offline tie (Boyd & Ellison, 2008; Harrison & Thomas, 2009). Unlike

Facebook or other socially oriented software, SNSLLs are designed with a pedagogical intent; yet their semiotic design resembles other SNSs in that they allow users to construct a public profile, elaborate a list of friends, and traverse their own and others' network of connections (Boyd & Ellison, 2008). Broadly speaking, SNSLLs combine in one interface elements from traditional language courses with elements of virtual communities such as Facebook. Concerning language learning, SNSLLs offer courses in several languages with freemium<sup>2</sup> access. Learning activities are introduced through interactive activities including pronunciation, vocabulary, grammar, dialogues, reading, translation, peer correction, voice recording and chat (Liaw, 2011; Brick, 2011a,b).

### Concepts from Multimodal Research that Inform the Study

This study draws on the concepts of mode, design and intersemiotic relationships. Mode refers to the semiotic resources that materialize any kind(s) of representation by means of material tools such as visual image, verbal language, spatial distribution and gesture. Modes are historically, culturally and socially shaped and allow multiple realizations of discourses and types of semiotic interactions (Kress & van Leeuwen, 2001; van Leeuwen, 2005; Kress, 2010).

Design refers to the motifs behind “choosing modes for representation, and the framing for that representation” (Kress & van Leeuwen, 2001, p.45). Design fulfills three major functions. It fulfills an ideational function because it represents the experience of ‘the world around and the world inside us’; it realizes an interpersonal function by enacting social interaction; and finally it presents to us a coherent ‘world of the text’ by means the textual metafunction (Kress & van Leeuwen, 1996, p. 15). In short, design describes both the active process of meaning making through semiotic resources, and the organizational structure that stems from the act of designing.

Finally, the orchestration of semiotic materials (modes of communication) gives shape to a

multimodal ensemble (Kress, 2010). The different semiotic elements of a multimodal ensemble (e.g. moving image, written language, color) carry meaning by themselves and create meanings when they combine. The purpose of multimodal ensembles is to generate particular meanings and enact responses through the combination of the distributed meanings across modes—what Royce (1998) and Jewitt (2009) call intersemiotic relationships.

### Theories of Learning and CALL/CMC

Despite the diversified theoretical constructs that have emerged to explain learning, most scholars agree on three overarching theories of knowledge: behaviorism, cognitivism, and constructivism (Ertmer & Newby, 1993; Pritchard, 2009). The general tenets of these theories of human cognition have branched out in more specific areas of knowledge such as applied linguistics and, in particular, SLA (Johnson, 2004; VanPatten & Williams, 2007; Larsen–Freeman, 2007; Ritchie & Bhatia, 2009; Mitchell, Marsden, & Myles, 2013). During the 1950s behavioral psychology heavily influenced the understanding of second language learning, conceived of as any other kind of learning and as the formation of habits mainly through imitation and repetition (Mitchell et al., 2013). The cognitive view challenged behaviorism and became the dominant SLA theory up to now. With the cognitive view, the field of SLA has diversified into an array of theories comprising inter alia Schumann’s Acculturation Model, Tarone’s Variable Competence Model, Andersen’s Nativization Model, and Krashen’s Monitor Theory (see VanPatten & Williams, 2007). At the risk of great simplification, it is possible to state along with Cook (2010) that in the cognitive tradition of SLA “learning tends to be regarded as a change in an individual’s cognitive state... [and it is acquired] through a largely individual, cognitive process and through exposure to input” (p. 2). Lately, the cognitive approach has faced criticism on different accounts, involving mainly its neglect to acknowledge

the central role of social and cultural variables (e.g. personal narratives, gender, and identity) in language learning (Block 2003; Cook, 2010; Atkinson, 2011). Atkinson's (2011) volume *Alternative Approaches to Second Language Acquisition* features different sociocultural approaches that draw on social constructivist theories of learning. Taken together these approaches reformulate the conceptions of L2 by arguing that learning is a social and cognitive accomplishment and that knowledge and learning emerge from socialization in communities in which social meaning is situated and distributed (Ortega, 2011).

Traditionally, scholars in the field of CALL/CMC identify three periods that echo the language learning approaches in the field of SLA (Warschauer & Healey, 1998; Gruba, 2004; Fotos & Browne, 2004; Warschauer, 2005; Blake, 2013). The first stage, named Structural CALL (also Behaviorist) (1970s-1980s) focused on repetitive language drills and the accuracy of computer instruction in contrast to classroom-based instruction. The stage of Communicative CALL (1980s-1990s) stressed the functions of language, implicit teaching of grammar, and the creative use of language. Finally, Integrative CALL aimed at articulating various language skills in more realistic environments. It drew on teaching approaches such as task-based, project-based and content-based in combination with multimedia products and the Internet. In turn, these three frameworks of CALL adopted language-learning theories that dominated their respective periods. Thus, Structural CALL aligned with a Behaviorist paradigm, whereas the Communicative and Integrative perspectives were informed by the cognitive and socio-cognitive paradigms, respectively (Levy, 1997; Luke, 2006).

CALL/CMC is being increasingly influenced by sociocultural approaches (Lantolf & Thorne, 2006) and lately by ecological views of language and learning (van Lier, 2004; Blyth, 2008; Lafford, 2009; Reinhardt, 2012). With the development of novel forms of computer mediated communication such as social networking, followers of the

cognitive view in CALL have seen the need to look at learning as a result of often conflicting and complementary issues of identity (Block, 2013; Norton & Toohey, 2004), socialization (Kramsch, 2002; Duff & Hornberger, 2008), gender (Pavlenko, Blackledge, Piller & Teutsch-Dwyer, 2001), and ethnicity (Norton, 2000; Riley, 2007). An approach that has enriched the discussion of the socio-cognitive approach in CALL is the ecological model. Reinhardt (2012) explains that under the ecological view “learning is dynamic, contingent, non-linear, and self-organizing in nature, and systems of language use/learning emerge in nested patterns” (p. 64). In a similar line of thought, Larsen-Freeman (2002, 2011) posits that the ecological approach looks at language and learning as a complex system and, adopting this purview permits the exploration of the interdisciplinary, multimodal, multiscalar semiotic practices among computer-mediated artifacts, individual learners, and their situated cognition and agency.

## Methods

A descriptive and explanatory case study was adopted (Yin, 1994), along with auto-ethnographic narrative (Reed-Danahay, 1997; Ellis & Bochner, 2000). A case study “is a problem to be studied, which will reveal an in-depth understanding of a “case” or bounded system, which involves understanding an event, activity, process, or one or more individuals” (Creswell, 2002, p. 61). Busuu constitutes the case under study and the aim is to understand the workings of SNSLLs and the processes of meaning making enacted through their semiotic design and their affordances.

Drawing on my own learning experience and my uses of the affordances of the website interface, I decided to write an autoethnography in order to make better sense of the ways language learning is enacted. An autoethnography “features concrete action, emotion, embodiment, self-consciousness, and introspection portrayed in dialogue, scenes, characterization, and plot” (Ellis, 2004; p. xix), through which the subjective experience of the researcher becomes an intrinsic part of research

(Anderson, 2006). For example, recently Gruba and Clark (2013) conducted an autoethnographic study to inquire about the assessment practices of three SNSLLs (Livemocha, Busuu, and Babbel). The authors report that interpreting their own experiences and data reflexively contributed to extending their understanding of language learning communities. Likewise the approach served to provide theoretical illumination of the topic under scrutiny (Anderson, 2006).

### Data Collection Procedures

The data of this study consists of documentary materials, mainly, Busuu, Busuublog, and the researcher's (auto) ethnographic accounts. The documentary materials provide information obtained from publications about Busuu such as statistics, evaluations, and descriptions of the website. Additionally, I focused on the Busuu blog (<http://blog.busuu.com/>) that provides short articles on learning strategies, constant information about the features of the website, and statistics about Busuu. Busuu (<http://www.busuu.com/>) uses technological tools and affordances of Web 2.0 (O'Reilly, 2005) with different degrees of sophistication, such as networking tools, user created-content, and site-created content. Busuu is a European company created in 2008 that offers users up to 12 languages: e.g., English, German, French, Italian, Spanish, Portuguese, and Russian. It allows learners to use most of its features for free; however, it charges a monthly fee to become a premium member and gain access to additional functionalities such as voice recording or grammar exercises. Busuu offers a self-paced language program of 180 learning units enhanced by interactive multimedia content and a social networking environment. The units are distributed onto 4 levels according to the Common European Framework (A1, A2, B1, and B2). There are three types of units: Vocabulary, Grammar and Live Units. The Vocabulary and Grammar Units are composed of 'Areas', mainly: Vocabulary, Dialogue (Reading Area), Writing, Busuutalk (chat tool), Voice Recording, Review, Printable Learning

Material, and Podcast. The learning environment emphasizes community building through tools for on-line interaction such as audio and video chat, forums, and voice recording.

The autoethnographic accounts constitute another key data source in the study. The idea of employing autoethnography arose from my own experience as a user of Busuu during the time I was learning French. Thus, drawing on my familiarity with Busuu, I set up a period of 10 weeks in 2013 in which I undertook the role as a free user initially, and then as a premium member, intending to practice and reinforce my language skills. I completed 54 units during the time I participated as a member of the community. As a participant-experiencer, I kept a journal where I chronicled all my reactions, feelings, and reflections after each study session. Additionally, I used a screen recording program to examine my work and interactions on the website afterwards.

### Data Analyses Procedures

Quantitative and qualitative procedures were used to present a picture of how the concept of language learning is portrayed through the website design, activities, and structure of lessons. Discourse analysis was employed to examine linguistic patterns in the documentary data obtained from the Busuu Blog and the journal. Particularly, the software Open Code was employed to examine the ethnographic narrative. The software provides for the codification of data by subjects, broader themes, and emergent categories, as suggested in grounded theory (Strauss & Corbin, 1990). Multimodal analysis was mainly utilized for examining the semiotic design of various sections of the website. Drawing on Baldry and Thibault (2006), I privileged semiotic clusters (groups of multimodal elements) to map out the design of multimodal texts and then, following Bezemer and Jewitt (2010), I focused on 'modes' of communication as units of analysis since they function as the "organizing principle of representation and communication" (p. 183). The last step consisted of establishing how intersemiotic

relationships among modes conjoined to create specific meanings (Machin, 2007). To carry out the multimodal analyses, I developed various matrix tables in order to categorize semiotic modes and frequencies of elements on the website. Finally, several software programs were employed to help qualify and quantify focal elements from the semiotic design of Busuu, including data and corpus tools such as Antconc and Antwordprofiler (Anthony, 2013). These analytic tools yielded results that allowed me to draw conclusions about the nature of learning on Busuu. The next section focuses on the main findings of this study.

## Findings and discussion

### Language Learning on Busuu: From Behaviorism to Integration of Learning Views

One of the first views on language learning identified on Busuu is the behaviorist perspective. On the Busuu Blog, the Busuu team publishes short articles that discuss learning strategies, advertise the company's products, or announce news about Busuu. Sometimes the articles on learning refer to the importance of vocabulary or culture in language teaching. On June 11, 2013, Busuu published an article that could be considered a statement about the concept language learning on the website. The article titled "Imitation is the Key to Learning Languages" describes from a psychological perspective why language learning is faster if speakers imitate the language patterns of the interlocutor, who should preferably be a native speaker. The author goes on to cite research from the 70s to strengthen the argument: "In the 1970s, American psychologist Andrew N. Meltzoff identified (sic) so-called 'social learning', where people or animals observe and then copy their companions. "Imitation accelerates learning and multiplies learning opportunities", (sic) he noted. "It is faster than individual discovery and safer than learning by trial and error" (Bussu).

Obviously Meltzoff's work on neonates' imitation is taken out of context here to support the idea that language is a behavior that is learned through imitation of an external stimulus, evok-

ing Skinner's (1957) postulates on the nature of human learning and language development. This behaviorist view, however, combines with cognitive and constructivist views of learning in different ways and spaces of the website, as we will see below. I will focus on several aspects of the language program that Busuu offers: introduction to language contents, assessment practices, and system of rewards<sup>3</sup>.

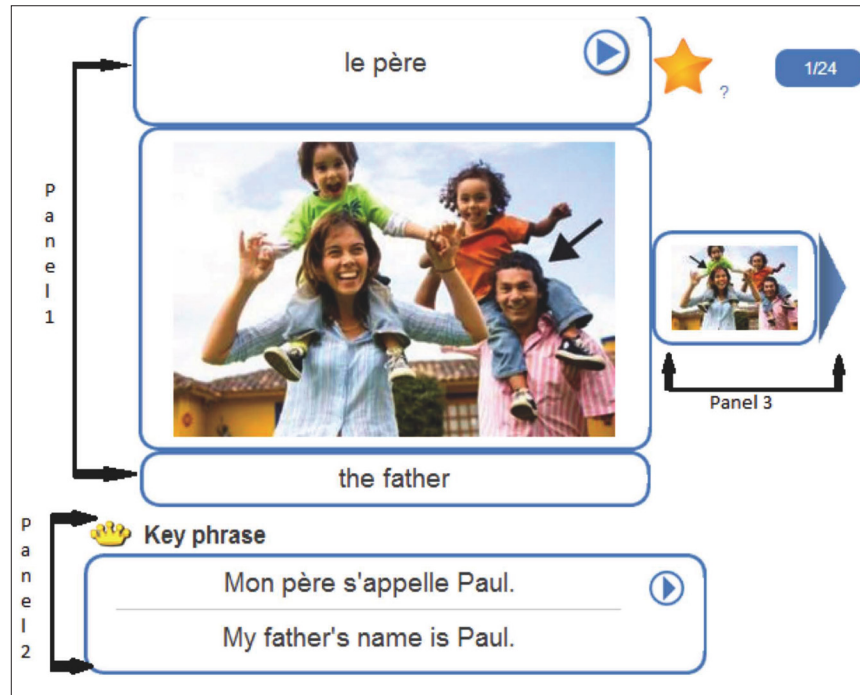
### 1. Introduction to Language Contents

The language program of Busuu consists of 180 units of which 110 introduce vocabulary and expressions, while 36 focus on grammar. The way language is organized and presented in the syllabus draws on cognitive and behaviorist views of learning originating in SLA and CALL/CMC. Busuu assumes a linear organization of linguistic content in which language learning appears as the acquisition of rules distributed from simple to more complex structures. This hierarchical way of organizing language in terms of rules also echoes the cognitive view of SLA. Under this view, a learner's linguistic competence is comprised of a set of rules that s/he must take in and that 'will grow to constitute a network of connections between nodes' (Ellis, 2010, p. 28).

Linguistic contents are introduced in the Vocabulary and Grammar Areas on Busuu. The pattern of presentation is always the same with the aim of creating a learning routine, which is enhanced by the multimodal semiotic design of the interface, divided into three panels (see figure 1). A word or sentence is introduced with audio at the top of the image ("Le père"). The middle section of the panel depicts a picture which provides a context of association (A photo of family where the man, playing the role of father, is signaled through a vector: arrow). Finally, the lower panel exhibits the translation of the word, phrase or sentence introduced in panel 1 ("the father"). In most cases, the interface of the Vocabulary Area places a panel at the bottom containing a sentence example ("*Mon père s'appelle Paul*") and its translation (My father's name is Paul) that contextualizes the word or phrase introduced.



Figure 1. Introduction of Lexical Item in Vocabulary Area



Source: Busuu

This panel also has a recorded audio of the sentence. It is interesting to notice how the semiotic design and intersemiotic relationships of the slide also serve to materialize the views of learning assumed on the website in which language is graded from easy to complex. The top-down reading path suggests a linear and hierarchical organization of language contents departing from the lexical level and mov-

ing down to the sentence level. This sequencing, characteristic of lexical and structural syllabi, is usually associated with behavioral and cognitive theories of learning.

Figure 2 below shows the way grammar is introduced on Busuu. I have extracted three images from a grammar lesson to indicate how the subject pronoun 'il' (he/it) is combined with the affirmative,

Figure 2. Three Slides from Grammar Activity of Unit "Le Verb Être"



Source: Busuu

negative and interrogative forms of verb “Être” (to be). Busuu presents the verb by conjugating it with all subject pronouns (I, you, he...) in affirmative, negative and interrogative forms, a type of exercise that resembles the drill-and-kill approach of behaviorist-oriented methods such as the AudioLingual Method (Howatt, 1986; Richards & Rodgers, 2001).

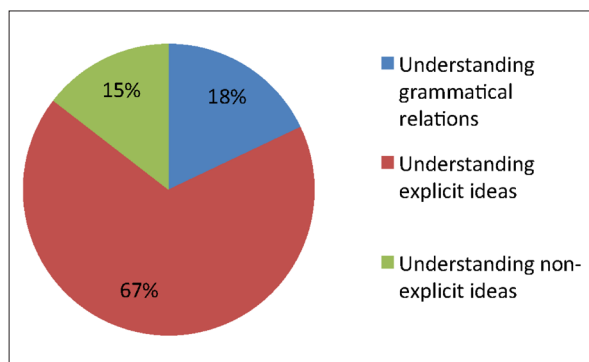
The semiotic design of each slide in figure 2 draws on Associationism—a precursor to behavioral psychology—“and an early name for the process psychologists today call learning” (Schultz & Schultz, 2008, p. 50). Associationism hypothesized that the mind is organized by means of associations and postulated two laws to explain the process of remembering: contiguity and repetition (Schultz & Schultz, 2008). The law of contiguity states that people tend to remember easily if events or things are close to each other in space. A look at Figure 2 shows that each one of the 3 semiotic clusters is spatially arranged in a top to bottom reading path where different modes of communication closely interact to generate associations between sound, written language and visual image. The law of repetition states that associations are stronger if things or events are frequently repeated. In Figure 2 repetition not only takes place by guiding the user through the conjugation of all personal pronouns in the three sentence types, it is also encouraged through the semiotic design and intersemiotic relationships of the interface that intend to reproduce the same meaning in different modes of communication: in the first semiotic cluster, the upper space includes written language “Il est mince” and sound (interactive play icon); the middle semiotic space displays a photograph (thin man on a canoe); and the lower space uses written language: a translation of the sentence introduced above “He is thin.” Judging the pedagogical potential of the law of contiguity and repetition is not within the scope of this study; however, one of the categories of analysis of my autoethnography named “My learning practices” comments on how when struggling to recall the written form of words or expressions, the connection between image and verbal language was

quite helpful: “remembering the picture brought up the word to my mind instantaneously” (April 9, 2013). This suggests that indeed the cognitive association of visual images and verbal language facilitate learning as has been proved elsewhere by Meyer (2001).

## 2. Assessment

Formal assessment through tests or quizzes takes place at the end of each Vocabulary and Grammar Areas and in the Dialogue Area (Reading Area). In the Vocabulary and Grammar Areas assessment consists of a set of exercises such as drag and drop, dictations, and the ordering of jumbled words, phrases, or sentences where the same imagery and accompanying vocabulary and grammar are recycled. The testing system favors rote memorization of vocabulary and grammar forms. The assessment activity in the reading comprehension section suffers from similar limitations. In this activity a dialogue is presented and then followed by a quiz. An analysis of the types of reading skills (figure 3) required to answer the quiz shows that the greatest percentage of the questions asked focus on intensive reading (18%) (Brown, 2010) and on factual information (67%). These percentages contrast with the lower rate of questions (15%) that involve higher-level thinking such as making inferences. Gruba and Clark (2013), who focus on technology-mediated assessment of SNSLLs, discuss current language learning and assessment metaphors. The authors discuss the metaphor of language learning as ‘instruction’, which describes virtual communities with pedagogical configurations that emphasize accuracy and fluency and that focus on assessing products and structures of a language. By and large, the semiotic spaces described in this section evidence behaviorist and cognitive views of learning correlating with Gruba and Clark’s metaphor. While these assessment activities focus in memorization and repetition at one level, they also emphasize cognitive processes that involve association (e.g. between images and verbal language), deductions and inferences.

Figure 3. Types of Reading Skills in Dialogue Activity



Source: Own work

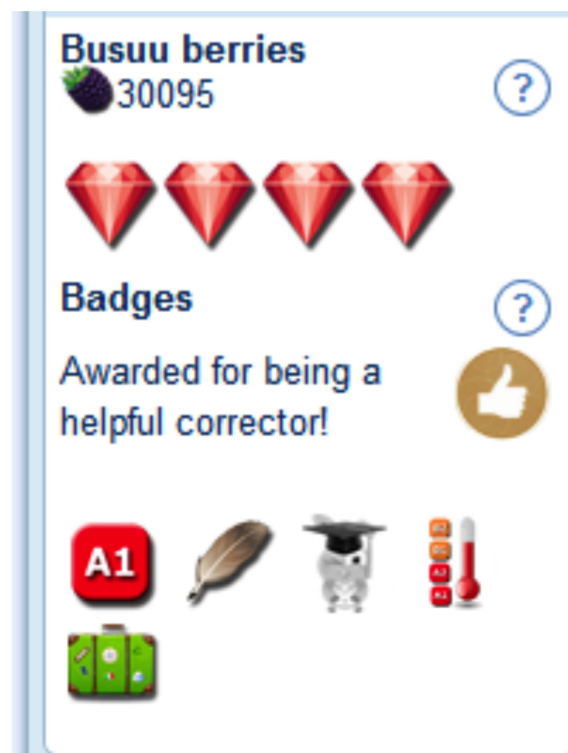
Despite the findings illustrated above, we cannot lose sight of the fact that Busuu is a complex system. Although the way language is introduced to users follows principles of behaviorist and cognitive views of learning, the website also provides other environments where users are required to interact and think of learning as emerging from interaction and co-construction. Other spaces of the website integrate multiple views of learning that materialize on the chat, the forum, and the concept of gamification and the language garden. In the interest of space, I will focus on the last two themes to show how on Busuu several language learning views coexist.

### 3. System of rewards and gamification of learning

Busuu has developed a battery of semiotic tools to stimulate users to complete the language program. Among the most significant tools is the system of rewards. Figure 4 shows some of the badges that users obtain when they collaborate in the community (e.g. correcting posts), complete learning units, or finish a course level. Busuu berries are awarded every time users complete any activity on the website (finishing a learning activity, making corrections, taking tests), the ‘diamonds’ reflect the activity on Busuu, and a brown ‘thumbs-up’ badge is received for correcting more than 50 posts. The badges at the bottom in Figure 4 represent several actions. ‘A1’ and the ‘green bag’ mean that a course was completed, while the ‘feather’ communicates

that the user has commented on more than 100 posts. The last two badges indicate that the user reached a proposed learning objective (‘bonny in black cap’) and that the user took a placement test (‘thermometer’).

Figure 4. Example of Rewards Awarded to Members of Busuu



Source: Busuu

Busuu’s system of rewards could be considered a materialization of a behaviorist theory. The Busuu berries are the case in point since they are awarded every time a user finishes an activity on the website. Some of the messages that pop up awarding berries include: “Congratulations! That was correct, congratulations you have received 1 busuu-berry!” “Congratulations! You have received 5 busuu-berries! In *Behavioral Modification: Principles and Procedures*, Miltenberger (2008) refers to this type of input as continuous reinforcement, “a schedule of reinforcement in which every occurrence of the instrumental response (desired response) is followed by the reinforcer” (p. 86).

Schedule reinforcements are typical in instructional design in computer mediated learning and in the area of CALL it was particularly salient during the tutorial CALL stage (Kern 2006; Blyth 2008). The behaviorist principle postulates that in this type of reward learning environment a positive reinforcement often leads to increasing the strength of the behavior. Unfortunately, research on SNSLLs has not studied this rewarding mechanism and its possible impact on language learners and language learning.

One conclusion that stands out is a conceptual tension brought about by the system of rewards on Busuu. This tension implies that many times the behaviorist view of learning needs to articulate with the cognitive and socio-constructivist paradigms in view of the design of some of the activities on Busuu. For example, although the system of rewards follows behaviorist principles, one of the ways to obtain those rewards is by engaging in collaborative and constructivist activi-

ties. Some of these collaborative activities include written exercises, audio recording, and chat. What is more, the system of rewards takes a social turn when it comes to the language garden interface. The language garden is a semiotic space that represents the language learning process of users (see Figure 5). It shows the languages that users know and those that they are learning (Figure 5, Panel 1). The Language Garden grows in as much as users complete units and obtain berries (Panel 2). Users can buy tokens for the Garden (animated animals) after collecting a certain number of berries. What is interesting from the examination of the ethnographic narrative is my growing appeal for the development of the Language Garden during the time I was immersed in the community. These are some excerpts from the journal:

I feel good. The website does a good job because a pop-up message shows up every time you get berries or any other reward. I guess this is what raises my interest in Busuu. I also challenged

Figure 5. Language Garden



Source: Busuu

another member to get 50 Busuu berries. This is another kind of *game* in which you challenge another member of the community to finish three units in 24 hours. I have really obtained lots of berries today. This really works as a motivator; at least it does for me (04/19/2013).

These comments suggest that the system of rewards and the Language Garden need to be examined from another broader perspective such as the notion of gamification. According to *NMC Horizon Report: 2013 Higher Education* (2013), gamification is “the integration of game elements, mechanics, and frameworks into non-game scenarios” (p. 20). Busuu has designed subtle ways to promote competition. One of them is the berry-ranking system which encourages users’ to compare the number of Busuu-berries obtained to those of their friends (<http://www.busuu.com/help>). Another gaming activity is Busuu Challenge, which consists of competing with another member of the community to complete three units in less than 24 hours for a reward of 50 berries. The main purpose is to accumulate as many berries as possible to furnish the language garden.

What does gamification tell us about the language learning view of Busuu? The central idea behind gamification is to bring together elements from all views of learning: behaviorism, cognitivism, and social constructivism. It is an adaptation of the principles of stimulus-response which comes from behaviorism. According to the notion of incentivization, games motivate students through the concept of badges and other game mechanics (NMC Horizon Report: 2013 Higher Education, 2013; Daly, 2012). Games also boost learners’ cognitive development by engaging players in complex systems of rules, exploration and experimentation (Gee, 2007; Lee & Hammer, 2011). Finally, as Reinhardt (2013) argues, gaming enhances traditional learning activities by making them more enjoyable and effective. In fact, on Busuu the gaming dimension plays an important role in enlivening the repetitive and monotonous semiotic spaces such as the Vocabulary and Grammar Areas where behaviorist learning techniques

are dominant. Thus, gamification “builds goal-orientation, collaboration, and competition into otherwise boring or hard activities” (Reinhardt, 2013, para. 2). Aspects such as engagement and learner agency that I have discussed above bring to the fore constructivist understandings of how learning takes place. In short, the metaphor of the language garden used to represent language learning on Busuu is highly enhanced by its gaming dimension. As I exemplified above, during the time I was immersed in the community, the gaming affordances were paramount in boosting my motivation to learn and remain in the community.

The characteristics of Busuu as a learning environment relate to the tenets of the ecological perspective. Busuu constitutes an ecological space in which nested micro environments such as the Grammar and Vocabulary Areas, the Busuuchats, the Busuugroups, the Writing Area and the Language Garden afford multiple trajectories to develop semiotic repertoires either through traditional learning patterns (e.g. grammar language drills) or through mediated socialization processes (e.g. the Audio-Video Chat) (Kramersch, 2002; Duff & Hornberger, 2008). Although through its semiotic design (e.g. organization of contents) Busuu suggests certain navigational patterns and ways of learning and interacting, users always develop personal navigational and learning trajectories. Some nested micro environments within Busuu limit to a greater or lesser extent the potential for creation on the website; nonetheless, Reinhardt (2012) maintains that one characteristic of ecological systems is that “learning is dynamic, contingent, non-linear and self-organizing” (p. 64). This dynamism is perhaps inherent in the nature of social media and particularly interaction that depends on mediated communication, since “[the] locus of control shifts away from a stable genre schema to the computer user as the maker and improviser of solutions” (Baldry & Thibault, 2006, p. 118). The interfaces of Web 2.0 characterized by hyperlinked and multimodal semiotic designs afford multifarious navigational and interactional trajectories. Villanueva, Luzón and Ruiz (2008),

evoking Deleuze and Guattari (1991), argue that hyperlinking in digital texts resembles rhizomatic structures, in that they open several possible paths, which don't have a hierarchical relationship; it is in fact the action on the rhizomes that triggers a possible link among the different parts. In the case of Busuu the dynamism and adaptability afforded by hyperlinks within multimodal designs not only enhance agency and creativity, but also may activate learning processes since learners experiment with and develop their own learning paths.

### Conclusion and implications

The compositional elements of semiotic designs of SNSLLs provide valuable information about what can be learned and how people are expected to learn in these spaces. The current study has focused on examining how the affordances of Busuu, a social networking site for language learning, embody and enact certain ways of learning and, therefore, inform about subjacent views of learning. Rather than favoring a dominant view of learning, we should think that they materialize in a continuum along the different semiotic spaces of the website. In some spaces (e.g. Vocabulary Area) Busuu provides learning experiences in which language learning is represented as the product of repetition and processing of linguistic rules, while in some others the learning activities privilege a constructivist approach, thereby, emphasizing language learning as an emergent process of situated social interaction. Due to this, Busuu constitutes an ecological system of nested semiotic spaces where pedagogical elements and principles from different theories of language interweave in conflicting but at the same time complementary ways. Elements of learning views echoing different stages of CALL/CMC: behavioristic, cognitive, socio-cultural, and ecological (Blyth, 2008; Reinhardt, 2012), combine and demonstrate that “new theories [such as socio-cultural or ecological frames] do not generally succeed in replacing their predecessors, but continue to coexist with them uncomfortably” (Spolsky, 1990, p. 609). I believe, though, that this coexistence of theories is healthy and allows for better understanding

of phenomena, especially in digital environments where fluidity and dynamism arising from human interaction are at stake. In this sense, I agree with Ellis (2010), who argues that theoretical pluralism is inevitable when the phenomenon under study is so complex.

Some implications arise from looking at Busuu from a language learning purview, concerning conceptual, methodological and pedagogical issues:

- Language competency: This study did not set out to examine to what extent members of the community develop communicative competence. From the evidence presented here and my own experience as a user of the community, it could be said that language learning does happen. Nevertheless, more research is required to determine what kinds of competencies users acquire (linguistic, pragmatic etc.) and how much proficiency they develop (basic, intermediate, advanced knowledge). So far, research is inconclusive about the potential of SNSLLs to promote language learning (e.g. Brick, 2011a,b; Jee & Park, 2009; Liaw, 2011; Gruba & Clark, 2013; Potolia & Zourou, 2013).
- Improving semiotic designs: semiotic spaces such as the Grammar and Vocabulary Areas focus on repetition of decontextualized language forms. These sections as well as the assessment system of Busuu could incorporate activities that expose its members to authentic uses of language in situated social and cultural contexts. Given that some other semiotic spaces are already grounded in principles of constructivist learning, it seems plausible to look for principled pedagogical coherence across the different semiotic spaces that compose Busuu.
- Multimodal learning: This work has discussed that multimodal semiotic designs play a twofold role in terms

of enacting learning trajectories and offering affordances for users to develop novel ways to interact with and through digital interfaces and, thereby, construct new learning paths. The field of multimodal studies holds great potential for understanding the connection between language learning and the role of material design in the “multimodal turn” (Kress, 2003; Jewitt, 2006). Kress (2013) asserts that “[t]eaching and learning are instances of communication” (p. 121). He affiliates with sociocultural views in that without interaction there is no ‘sign-, meaning and knowledge-making’ but unlike these theories that are still mostly verbocentric and typographic, multimodality “provides the tools for the recognition of all modes [e.g. spatial distribution, image, typography, gesture] through which meaning has been made and learning taken place” (Kress, 2013, p. 133). Ultimately, the contributions of multimodality will help us gain a broader picture of how learning happens not only in CMC but also in face-to-face interactional contexts.

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### Footnotes

1. Other virtual communities such as Facebook or Myspace are classified as social network sites rather than networking sites because they are mostly used to connect people who are already members of an offline social network (Haythornthwaite, 2005).
2. According to Froberg (2014), "[t]he word "freemium" is a combination of the words "free" and "premium." It describes a business model in which you give a core product away for free to a large group of users and sell premium products to a smaller fraction of this user base" (para. 1).
3. Multiple spaces on Busuu such as the learning units, the lessons within the learning units, the chat interface, the forum interface, and the profile page could be examined to account for views of learning underlying their semiotic design. Due to space constraints, in this paper I chose to focus on three spaces that are representative of the views of learning identified on the SNSLL, and that embody three main educational dimensions: content presentations, assessment, and gaming.

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