

From a Usage-Based Model to Usage-Based Instruction: Testing the theory

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Abstract

This paper describes and evaluates a second semester Spanish university course which, in teaching students to orally communicate in Spanish, employed Usage-Based Instruction (UBI). UBI is a pedagogical approach which borrowed its name, and was inspired by, a usage-based model of language and language acquisition. It has been successfully used by the Foreign Language Program in the university level language courses described here for a number of years. The goal of this article is to document this pedagogical approach's success through external evaluation of Oral Performance Interviews conducted with the seven students enrolled in the course; these served as summative assessment at the end of the course, after about 80 hours of classroom instruction. Two groups of outside raters were recruited to evaluate students' recorded speech samples. The first group—three native speakers of Spanish—evaluated students' linguistic performance in terms of perceived proximity to that of native speakers' by means of a Nativeness Test. The second group—two instructors of Spanish—evaluated language samples through rubrics developed on the basis of the Performance Descriptors for Intermediate Level learners by the American Council of Teachers of Foreign Languages (ACTFL, 2012). The ratings revealed students' medium range of proximity to native speakers' performance in terms of fluency, accuracy, and ease of understanding, amongst others, and an Intermediate Level of oral performance in terms of the ACTFL Performance Descriptors.

Key words: usage-based model, speaking, second language, foreign languages, teaching methods, constructions, Usage-Based Instruction - UBI, foreign language teaching and learning, language in institutional setting

Introduction: The goals and the structure of the article

The term “usage-based,” coined by Langacker (1987), represents a relatively novel view of language and language acquisition shared by scholars working in such areas as Cognitive Linguistics and Cognitive Grammar (Barlow & Kemmer, 1999; Langacker, 1991a; Langacker, 1991b; Langacker, 2000; Langacker, 2005; Langacker, 2008), Construction Grammar (Fillmore, 1976; Goldberg, 1995; Goldberg, 2003; Goldberg, 2006), Corpus Linguistics (Römer, 2009; Sinclair, 1991; Wray, 2005), Usage-Based Linguistics (Barlow, and Kemmer, 1994; Bybee, 2006; Bybee, 2008; Bybee, 2010; Bybee & Hopper, 2001; Kemmer and Barlow, 2000), Cognitive Perspective in Second Language Acquisition (SLA; Ellis, 2006) and application of the usage-based model to SLA (Ellis, 2010; Ellis, 2014). Closely associated with this view is the Competition Model (McWhinney, 2013), and the theory of Connectionism (Rumelhart, McClelland, & PDP Research Group, 1986).

The usage-based model encompasses a variety of perspectives, all of which share the view that knowledge of language or a linguistic system in the mind of the speaker is emergent and based on experience with language, or, in other words, that knowledge of language is shaped by usage or usage events as well as generalizations made, and that language is grounded in general cognitive processes (Barlow & Kemmer, 1994; Bybee, 2010; Croft & Cruse, 2004; Kemmer & Barlow, 2000; Langacker, 1987; Langacker, 1999; Tomasello, 2000b). These views set the usage-based model apart from the earlier generativist perspective, according to which, we are born with an innate language faculty which is largely separated from the rest of cognition and is a container of language rules or grammar.

Pedagogical application of the usage-based perspective in teaching students to communicate in L2 (Language 2) is still in its early infancy. Most studies observe, rather than intervene with, L2 learning (Eskildsen, 2012; Li, Eskildsen & Cadierno, 2014), interpreting the data from a usage-based perspective. Some have attempted to arrange and observe learning outside the classroom, that is, *in the wild* (Barraja-Rohan, 2015; Wagner, 2015). To the best of our knowledge there is, to-date, only one large-scale study that attempted to apply elements of the usage-based model of language acquisition: the dissertation by Nguyen (2013) which involved 169 Vietnamese students studying English. The study employs the Dynamic Usage-Based (DUB) Approach to Second Language Teaching inspired by dynamic systems principles (Verspoor & Behrens, 2011) and a usage-based view of language; it relies on such major tenets of usage-based theory as a focus on input in a communicative context based on authentic materials, frequent or multiple exposure to input, focus on chunks, and use of L1 (Language 1) as a scaffold. The students exposed to the DUB approach outscored those in the control groups in receptive proficiency, linguistic self-confidence and willingness to communicate, and they tended to perform better in speaking. They did not, however, demonstrate any gain in chunks. A failure to produce positive results in this area is explained by the limited length of the course (one semester).

The DUB is an explicitly meaning-focused approach; it operates on the higher level of language processing. Students exposed to the DUB are not taught to produce the language or to encode thought in language, *per se*. This ability is expected to naturally emerge in the input-rich environment. Such an approach, in our opinion, underestimates the important role of lower levels of processing in speech production, which, according to Levelt's model of speech production (Levelt, 1992; Levelt, 1993; Levelt, 1994; Levelt, 1995; Levelt, 1999; Levelt, Roelofs, & Meyer, 1999) need to be highly automatized to ensure that its higher levels work smoothly and without interruption. It is these levels of speech production that the UBI instructional system is targeting, and in doing so, also attempting to apply all that the usage-based model of language tells us about language acquisition. This article describes this attempt.

Seven students, enrolled in the second semester university course, were taught to orally communicate in Spanish by means of the UBI methodology. To assess its impact, the course was evaluated in terms of students' oral performance, as recommended by Norris (2006). At the end of the semester, all seven students participated in the final course assessment—individual Oral Performance Interviews (OPI) conducted by the instructor. The interviews were recorded, and two distinct groups of raters were asked to evaluate the students' speech samples.

The two major objectives of this article are to 1. describe the UBI methodology and 2. share the results of the course evaluation.

The article comprises four parts. Its first part describes the instructional context in which the study was conducted. The second part contains an overview of the main tenets of the usage-based model of language along with their pedagogical implications. In the third part of the article, the reader will find an overview of the most distinctive features of the UBI. Evaluation procedures and the results of the evaluation are discussed in the fourth, final, part of the paper.

Instructional context

Byrnes (2012) recommends that foreign language curriculum should reflect the dynamics of a particular programmatic setting. The Foreign Language Program we discuss here developed its curriculum based on the unique settings within which it operates. The university where the UBI was developed is a small private university, almost 40 miles southwest of Chicago. In 1978, its Foreign Language Department was dissolved by administrative decision due to financial pressures. From 1978 to 2004, the university did not offer foreign language instruction to its students. In 2004, thanks to the \$1.7 million Title III Grant from the U.S. Department of Education, the university was able to re-launch the Foreign Language Program with its home in the Department of English Studies.

The new Program Director, one of the authors of this paper, was hired with a mandate to establish the type of instruction that would meet the immediate practical needs of the students studying foreign languages.

Today, twelve years after its establishment, the program offers courses in eight foreign languages, including both commonly taught and less commonly taught languages. Foreign Language is considered an elective course, and is not required for attaining a Bachelor's degree. The majority of the students enrolled in the courses offered through the program—many of whom choose not to continue to study the same language they studied at school—spend two semesters on language study on average.

In the pre-semester surveys, routinely administered at the beginning of all courses in all language sections, most students indicate that the ability to speak in the foreign language is their main goal for studying the language. Based on the fact that “The match or mismatch between the goals students have for their language learning and their expectations for achieving these goals may suggest how comfortable and satisfied students may be with their language study” (Magnan, Murphy, Sahakyan, & Kim, 2012, p. 102), the main goal of the program is that of fostering the development of students' ability to orally communicate in L2. Considering the limited amount of classroom time (about 80 hours of instruction per year, or three 50-minute sessions per week), the main challenge for the program is to provide its students with a tangible level of oral proficiency. From the outset, it became clear that a one-size-fits-all textbook-based curriculum would hardly be able to meet this challenge. In our search for more efficient ways to teach students to orally communicate in L2, we came across the usage-based concept of language acquisition, the main appeal of which is its focus on spoken language and cognitive commitment which, in turn, requires that the principles of linguistic structure should reflect what is known about human cognition with the ensuing powerful pedagogical implications.

The main tenets of the usage-based concept and their pedagogical implications

Linguistic system arising from specific exemplars

Although the usage-based model of language acquisition encompasses a variety of perspectives, they all share the view that an abstract linguistic system in the mind of the speaker is learned gradually from language use. Language learning, in this view, is based on *usage events*, instances of producing and understanding language (Kemmer & Barlow, 1999) as well as concrete language exemplars, words, phrases, and sentences that the speaker hears in the environment. These are first imitated, and then reproduced by the speakers, usually with the same communicative purpose (Lieven & Tomasello, 2008; Tomasello, 2000a; Tomasello, 2000b; Tomasello, 2003). With repeated use, the speaker begins to recognize patterns underlying specific linguistic exemplars. Gradually, through the processes of entrenchment, analogy, categorization, and generalization over individual utterances, more abstract linguistic schemas—semantic, phonological, or symbolic structures that are less specific than concrete utterances—evolve (Langacker, 1987). Schematization allows speakers to gradually begin creating with the language, that is, produce sentences they had never heard or seen before.

While current foreign language pedagogy emphasizes students' creative use of language earlier in the beginner courses, the usage-based tenet about the linguistic system arising from specific language exemplars suggests that the focus in beginner language courses should be on providing learners with ready-made and ready-to-use grammatically, lexically and phonologically specific exemplars that students could first observe, imitate, and memorize through communication. The expectation, in this case, would be that, as their linguistic experience grows, learners would begin to make generalizations and develop schemas; that is, the linguistic system in their mind will develop gradually with use. In a classroom, the process of such schematization may also be facilitated and supported by occasionally drawing students' attention to formal features of the language.

Language as constructions

The usage-based perspective sees language as a large array of meaningful units (Langacker, 1987) or constructions—conventionalized or learned pairings of form and meaning (Goldberg, 2006; Goldberg, 2013). Constructions exist at all levels (morpheme, word, phrase, chunk, and sentence) and *any* conventionalized form-meaning mapping used for communicative purposes is recognized as a construction: root words such as *book*, *dog*; morphemes such as *un* + *V* (e.g., *undress*); idioms (e.g. *jump the line*); partially filled idioms (e.g. *jog [someone's] memory*); and fully abstract sentence patterns, for example *Subj aux VPpp* (Goldberg, 2003). A longer utterance may, thus, have several distinct constructions within it.

Learning a language, in the usage-based view, is essentially the learning of constructions—a premise supported by a significant number of studies that have shown that language is indeed acquired both by L1 and L2 speakers in a construction-like fashion (Bencini & Goldberg, 2000; Eskildsen, 2012; Gries & Wulff, 2005; Li et al., 2014; Lieven & Tomasello, 2008; Mellow, 2006). Since constructions provide a direct link between the surface structure and the construction's meaning without intermediate representations (Bybee, 2013), they, according to Goldberg (1995), effectively replace the notion of rules as such, which then, according to the usage-based perspective, only *describe* rather than *generate* the language (McClelland, Rumelhart, & PDP Research Group, 1986).

Underlying the acquisition of constructions is the psychological process of chunking (Ellis, 2003). In fact, constructions *are* chunks, neuromotor routines, or sequences of actions that occur together and are chunked into a single action and processed as one unit through practice (Bybee, 2008). Accordingly, “Chunking underlies the attainment of automaticity and fluency in language” (Ellis, 2001, p. 38). The more chunks constructed, the more automatic the performance.

The notion of chunking is inseparable from memory. In fact, a chunk is an organizational unit in memory. Pawley and Syder (1983) argued that memorized chunks (phrases, idiomatic expressions, frequent collocations, or just two words that are often used together) constitute the bulk of one's knowledge of language—in producing speech, we mostly piece them together. They show that “Only a minority of spoken clauses are entirely novel creations” (Pawley & Syder, 1983, p. 205). In the same vein, Ellis (2006) defines language as the recycling of constructions that we memorized from prior use.

The pedagogical implications of the above are significant: teaching students to orally communicate in L2 should be centered on language constructions, including open-slot constructions. Bybee (2008) recommends that students should first learn a limited number of lexical tokens that are used in specific constructions. As the course progresses, and the number of words that could fill the open slots in a given construction increases, students should be encouraged to use new lexical tokens in the open slots of the constructions learned earlier, in order to produce the phrases or sentences they have never heard or produced before. A focus on constructions allows the abandoning of the traditional componential treatment of language (phonology, morphology, syntax, the lexicon) and also does away with separation of grammar and vocabulary inherent to today's dominant teaching paradigm. Rather than having students memorize lists of words in their dictionary forms and then teaching them how to plug them into grammatical rules, the focus of instruction should be on helping students to begin using constructions, combine and re-combine them and make generalizations on their basis, that should eventually lead to language productivity.

Frequency as the main determinant of language acquisition

The usage-based view of language underscores the role of frequency in language learning, and there is a lot of evidence supporting it (see Bybee, 2006; Ellis, 2002; Ellis, 2006; Ellis & Larsen-Freeman, 2009; Eskildsen, 2009; Goldberg, 2003; Goldberg, 2006; Larsen-Freeman, 2012; Nosofsky & Palmeri, 1997; O'Grady, Lee, & Kwak, 2009; Taylor, 2012; Tyler, 2012; or Yamaoka, 2006). For example, in her 1976 study, Larsen-Freeman found that the acquisition order of English morphemes by learners of different ages and language backgrounds was a function of the frequency of occurrence of these morphemes in adult native speaker speech. Ellis (2002) showed that that frequency is a fundamental cognitive mechanism in every domain of language processing.

Frequency provides learners with an opportunity to relate form and function multiple times. The more often a linguistic unit is repeated, the more it becomes established, or entrenched, in the mind of the speaker (Langacker, 1987). Entrenchment is a cognitive routinization which affects the processing of the unit and results in both prefabrication—a process by which meaningful sequences of words are memorized and retrieved as wholes—and automaticity, which allows speakers to access and retrieve language from memory effortlessly and rapidly.

However, as Bybee (2008) notes, “common sense tells us that for second language learners repeated exposure and practice are essential to the development of the cognitive structures that lead to fluent and grammatical speech” (p. 216). Frequency today plays virtually no role in foreign language pedagogy because of its association with behaviorism and the audio-lingual approach. The importance assigned to frequency in the usage-based perspective points to the need to rehabilitate the role of deliberate repetition in L2 instruction.

Language is learned and is learned like anything else

Contrary to the modular view of language, which sees language as a module in the brain isolated from the rest of cognition, and in agreement with the cognitive commitment–needing which requires that the principles of linguistic structure should reflect what is known about human cognition from philosophy, psychology, artificial intelligence and neuroscience—the usage-based perspective sees language as part of general cognition and thinking, and language learning as learning anything else. Knowledge of language is organized in the minds and retrieved as any other knowledge (Croft & Cruse, 2004) and, as Ellis (2006) aptly puts it, learning a language is “cut of the same cloth as the rest of human cognition” (p. 101).

The learning mechanisms involved in language learning, according to the usage-based concept, are the same as those involved in any other learning. They include:

- rich memory (remembering of utterances and storage of detailed information from experience)
- categorization of experience (search for attributes that can be used to distinguish exemplars from non-exemplars)
- associative learning (matching form with the corresponding meaning)
- comparison
- pattern finding
- generalization of conceptuels, schema and prototypes from exemplars
- automatization (practicing until using structures may proceed without much effort)
- entrenchment or routinization
- chunking (the formation of sequential units through repetition or practice)
- schematization (the process of abstraction from instances or exemplars)
- analogy (establishing likeness between the new and the old structures or mapping of an existing structural pattern onto a novel instance)
- imitation, as well as attention, perception and memory (Bybee, 2002; Bybee, 2010; Bybee, 2013; Ellis, 2001).

Unlike Krashen’s (1994) definition of learning as a formal knowledge of language or knowledge of grammar deemed ineffective in mastering a language, learning in cognitive, educational and developmental psychology is generally defined as change in knowledge or behavior (Anderson, 1995) as a result of experience which involves relatively permanent changes in the nervous system—strengthening of some synapses and weakening of the others, activation or rerouting of neural pathways, and establishing patterns of neuronal connections. By its very nature, learning is an active and goal-directed activity. The usage-based proposal that language is learned (rather than acquired) suggests a more proactive approach than today’s somewhat *laissez faire* attitude to teaching speech production, according to which, the ability to speak is expected to naturally emerge from sufficient amount of input. It also points to the necessity of bringing language instruction back into a broader realm of general learning theories, concepts and principles which emphasize such crucial categories as memory, analogy, automatization and associative learning, and thus, putting an end to several decades of the field’s self-imposed isolation.

L1-L2 relationship

In the usage-based perspective, learning of both L2 and L1 are seen as essentially similar processes since they rely “on a single underlying set of language learning mechanisms” (McWhinney, 2013, p. 100). They are, at the same time, significantly different, in that, learning L2 takes place with L1 already firmly entrenched in the mind of the learner, who brings a multitude of L1 constructions to the process of L2 learning. Foreign language learning, therefore, can be seen as reconstruction or revision of already existing first language constructions which takes place against the background that can be described as mutual L1 vs. L2 competition, since they may represent alternative ways of contracting the same reality (Ellis & Cadierno, 2009).

If L2 learning is indeed a process of *revision* of L1 constructions, then it makes good pedagogical sense to rely on L1 constructions as a point of departure when introducing their L2 counterparts. Deliberate comparison between the different ways in which the two languages express the same meaning may not only prevent errors, but also significantly contribute to the understanding of how the two languages construe experience in different ways and use alternative ways of thinking for speaking (Slobin, 1996). Additional support for the use of L1 comes from learning theory and, specifically, from Ausubel’s (1968) theory of meaningful verbal learning.

According to this theory, then, for new learning to acquire meaning, it needs to be related to the cognitive structure that already exists in the learner's mind to which the new learning can then be anchored—in our case, this anchor is L1.

Main features of the UBI

The goal of the UBI instructional sequence is fostering students' ability to orally communicate in a foreign language by focusing on those levels of speech production that are responsible for linguistic encoding—the levels where the thought is translated into language code. Speaking “is our most complex, and our most species-specific, cognitive-motor skill” (Levelt, 1994, p. 90).

Similar to any complex skill, it relies on the interaction of several components which can be roughly divided into two major levels: a level of intentions and ideas, where message is conceived, called by Levelt (1994) the conceptualiser; and the level of linguistic encoding which includes grammatical and phonological encoding and articulation, or, in Levelt's (1994) terms, the formulator and the articulator, respectively. The generation of ideas in the conceptualiser is the least automatic, and a relatively slow process, requiring a lot of attentional resources. For it to work smoothly and without interruption, the operations of linguistic encoding, which take place in the formulator and the articulator—the two lower levels of speech production—need to be highly automatized to allow sufficient attentional and working memory resources for conceptualising the message. This fact is largely neglected by today's foreign language theory and practice, based on the assumption that this crucial component of speech processing will take care of itself as long as the students are provided with sufficient amount of input and communication similar to the situation in which children acquire their first language. It is often forgotten, though, that when children first learn their mother tongue, they acquire automaticity of the lower levels of speech production through *huge* amounts of input and output. The inevitably limited amount of input and output in a classroom does not allow such automaticity to develop sufficiently on its own. As a result, linguistic skills are often drowned in the flow of communicatively oriented activities and are left unlearned. This situation, in our opinion, can be rectified by focused instruction targeted specifically at the automatization of lower levels of speech production—the levels which include the grammatical, lexical, and phonological encoding of the message and its articulation. This is what constitutes the main goal of the UBI which, in reaching this goal, seeks to employ refreshingly novel ideas and notions offered by the usage-based model of language and language acquisition, such as the item-based nature of the development of the linguistic system; constructions as the main units of language; and frequency; as well as the premise of language learning relying on general, non-domain specific learning mechanisms with their far-reaching pedagogical implications. The main features of the UBI are described in the next section.

Construction as a unit of learning

Based on the usage-based perspective which views language as a vast repertoire of constructions, the UBI also employs constructions as units of learning. This means that the course, semester, and individual lesson learning outcomes are articulated in terms of specific constructions students need to master in order to be able to communicate within a given semantic theme. The process of selecting such constructions is guided by one simple question: what should learners be able to say when they talk about, for example, their school, their academic interests, their family, and their leisure activities? Thus, in order to be able to talk about their academic pursuits, students should be able to say what year students they are, what they study or are majoring in, what classes they take, like or dislike, and why. These objectives are then translated into specific, often open-slot, constructions such as “I am a first/ second/ third/ fourth year student. My major is Biology/ Psychology, Chemistry. This semester, I take Biology/ Psychology, Chemistry.”

Following Bybee's (2008) recommendation, in the UBI course, students initially learn a limited number of lexical tokens that are used in specific open-slot constructions. As the course progresses, and the number of words that could fill the open slots in a given construction increases, they are encouraged to use new lexical tokens in the open slots of the target constructions learned earlier and to produce the phrases or sentences they never heard or produced before.

Constructions are learned in a piecemeal fashion (one construction at a time) which is known to characterize early language acquisition (Tomasello, 2000c) and is in accordance with the principle of teaching one thing at a time which allows both teachers and students to have a clearer vision of what they are doing (Kullberg et al., 2016).

Sequenced instruction

Utilizing the usage-based premise about language learning being similar to any other kind of learning, we sought to apply the principles that were found to facilitate learning by general learning theories and specifically Gagné's principle of sequencing of instruction (Gagné, 1985; Gagné & Briggs, 1974), in developing the UBI. The principle requires that planning for instruction should begin by identifying prerequisites or skills that are dependent on other skills, on the basis of which an instructional sequence is developed. Each next phase in such a sequence should be based upon a previous phase, which needs to be completed before the next stage begins.

Thus, in order for the students to be able to say on what days and how many times a week they work as in "I work three (four, five) times a week, on Wednesday, Monday and Friday," they will need to first master the following chunks:

- a. I work
- b. (four, five, six etc.) three times a week
- c. on Wednesday, Monday and Friday (Thursday, Tuesday etc.)

Before being integrated into a longer target construction, each chunk is practiced and internalized separately, and undergoes its own instructional sequence which generally includes:

1. *focused input activities*, in which students establish initial associations between the form and meaning
2. *forced choice output activities*, when students begin to meaningfully imitate the linguistic structure while it is still in their phonological loop
3. *output activities*, in which students retrieve the target structure from memory in response to visual, kinesthetic, or verbal cues
4. *scaffolded communicative activities*, in which students use the target structures in personalized task-based communicative activities

Each step is continued, until students demonstrate both fluency and accuracy in producing the target construction, that is, it is sufficiently entrenched in all students' minds. The latter is in accordance with Bloom's model of mastery learning which maintains that students must achieve a level of mastery in prerequisite knowledge or skills before moving on to acquire subsequent knowledge and skills. The appendix (Sample lesson plan) at the end of this article illustrates this instructional sequence in further detail.

Exemplar-based learning

Based on the premise that a linguistic system arises from specific instances of understanding and produces the language (Kemmer & Barlow, 2000), instruction in the beginner's UBI course is exemplar-based: it focuses on having students internalize ready-made grammatically, lexically and phonologically specific exemplars through use or communication while generally foregoing traditional grammar explanations prior to use. Instead, to facilitate generalization and schematization, students' consciousness is recruited at the stage where there is a sufficient quantity of exemplars of particular utterance types necessary for them to be able to make analogies and discover regularities. Considering the crucial role of memory in language production discussed earlier, the process of automatization is not so much rule-based as it is memory-based. Although students' consciousness can occasionally be recruited, and their attention is drawn to linguistic form, the ultimate goal is to help students commit to memory language chunks. When entrenched in the student's memory, each of these chunks can function as ready-to-use sequences of words in a variety of different constructional contexts. The expectation is that, as learners accumulate a significant number of such exemplars, they will begin to discover regularities underlying specific exemplars; they will begin to make generalizations, and subsequently develop schemas that would eventually allow them to use the language more productively, as is predicted by usage-based theory.

Iterative learning

Following the premise that frequency is the main factor of language learning, entrenchment of construction is achieved through multiple iterations which, according to Larsen-Freeman (2012), are different from repetition (saying the same form in exactly the same way as in the ubiquitous "Repeat after me" activity), in that, iteration is "revisiting the same territory again and again" (Larsen-Freeman, 2012, p 206) with an opportunity for the learners to do something a little bit different each time they engage in a (repeated) activity.

For example, after a new construction is introduced in the UBI, students are exposed to it multiple times through generous modeling and focused input. It is important that input activities vary. Here, students can match phrases with pictures, or engage in thumb up/thumb down or true/false activities. Once the instructor makes sure that strong initial association between the form and meaning has been formed, he/she moves on to output activities, in which students are again led to use and re-use linguistic units in a variety of both structured and more open, meaningful, personalized, communicative activities.

In the same vein, the UBI instructional system emphasizes the special role of continuous review. For new material to be transferred into long-term memory, it needs to be continually reviewed throughout the course.

New constructions are always reviewed in the next class as well as in the class following it, taking advantage of the important role of sleep in memory. Earlier acquired constructions are also reviewed as requisite knowledge, whenever the new construction is in some way related to this earlier, learned, construction. In case new vocabulary tokens fit into earlier acquired constructions, every effort is made to recycle them in the older constructions.

L1 as a support for L2 learning

Another distinctive feature of the UBI is the use of L1 to support instruction in L2. L1 in the UBI is utilized at different stages of the instructional sequence. When a new construction is first introduced to learners, L1 is used as an advanced organizer to ensure transparency of class objectives. The new construction, then, is explicitly compared to its L1 counterpart to highlight its features and demonstrate how one and the same meaning is expressed in different languages. In the same vein, the UBI does not shy away from using L1 as a cue for retrieval of L2 construction chunks from memory. Students, for example, may be simply asked to provide L2 equivalents for such chunks as “on Monday (Wednesday, Saturday etc.), three (four, two) times a week, at 5 (6, 7 etc.) pm, it’s hot (warm, sunny), two (four, five, seven etc.) years ago.” While traditional word-for-word translation has been rightly criticized as inefficient, chunk-based translation is an effective time-saving technique.

The study

The goal of the study (described below) was to assess the impact of the UBI on the students’ progress in learning to communicate orally in L2, as reflected in OPI conducted at the end of the semester and evaluated by external raters.

The participants of the study were seven 19 to 21 year old undergraduates and second semester students of Spanish, none of whom had taken Spanish for more than two semesters in high school or qualified as heritage Spanish speakers, thus representing a homogeneous group of beginning language learners. These students were exposed to the UBI methodology for two college level semesters (approximately 80 hours of classroom instruction).

In May 2014, all seven students that were enrolled in the second semester Spanish course participated in the OPI as part of the regular end-of-semester assessment. This type of interview is similar to that of its prototype, the ACTFL Oral Proficiency Interview, and is a live, casual conversation between the test-taker and the tester. Unlike the Oral Proficiency Interview which measures the test-taker’s ability to use the language regardless of where, when or how the language was acquired, OPI is limited to the content of a particular curriculum, and evaluates the speaker’s ability to use language that has been learned and practiced in an instructional setting, describing performance in terms of three ranges: Novice, Intermediate, and Advanced.

Each interview covered the range of semester themes (shopping, daily routines, weather, and university studies), and was conducted by the instructor who, through a series of personalized questions, elicited students’ speech samples to be rated by external evaluators. All interviews were audio-recorded.

Evaluation procedures

Two groups of external raters were recruited to conduct the evaluation of students’ speech samples obtained through the interviews. The evaluation comprised two parts: 1. Nativeness Test; 2. Assessment based on the ACTFL Performance Descriptors.

Evaluation through Nativeness Test

Our first attempt to measure the effectiveness of UBI was through the use of acceptability judgments from Spanish native speakers replicating a method that has been used in numerous language acquisition studies with purposes similar to ours (Duffield et al., 2002; de Garavito, Liceras & White, 2002; Goad, White & Steele, 2003; Tremblay, 2005; Valenzuela et al., 2009). For practical purposes, we will refer to the test as the Nativeness Test, even though none of these studies has adopted any name in particular for it. The Nativeness Test is a type of acceptability judgment task employed to report perceptions of native speakers regarding linguistic phenomena exhibited in interlanguage (Coward, 1997). Such phenomena may comprise sentence construction, prosodic features of the speech, variety of vocabulary in the prose, or any linguistic aspect that the researcher wants to have compared to that of a native speaker, based on the judgment of native speakers. In this type of test, at least two native speakers of the target language are asked to blindly judge the oral performance of the participants. The stimuli presented to the judges come as unedited audio files—not isolated tokens of language, as in traditional grammaticality judgment tasks in which the judges have the task of rating the speech they hear as compared to native speakers.

The judges' task is to rate specific aspects of the participants' speech production (e.g. pronunciation or rate of speech) from the perspective of a native speaker; such specific aspects are determined by the nature of the research.

In our study, independent non-academic raters were recruited through public advertising that called for candidates with native Spanish competency and higher education degrees from their native Hispanic countries. Additionally, all the candidates would have had to have lived less than ten years outside their native countries, since this would indicate that they still keep L1 competency robust (de Bot & Clyne, 1994).

The three chosen raters were born in, and had lived in, their native Spanish-speaking countries—Colombia, Bolivia, and Paraguay—for at least their first 25 years. Their ages ranged between 25 and 40 years, and at the time of the study, they had been living in the U.S. between two and ten years. All raters had received college education in their countries, yet none of their degrees was associated with language or education studies. The three raters received a two-hour training session provided by one of the researchers, where they got familiar with the items in the questionnaire, practiced using the Likert scale to rate the audios, and completed mock ratings.

The raters were expected to listen to the students' speech samples, and evaluate their performance in Spanish based on the questionnaire that included the following specific criteria:

1. Speaker's pronunciation
2. Time that the speaker takes to articulate an idea
3. Number of pauses
4. Control of grammar
5. Vocabulary used
6. Ease of speech
7. Overall impression of fluency

Each of the above items was presented as a Likert scale, where one end represented a level of performance akin to a novice language learner's, and the opposite end represented a native speaker's level of performance. The raters were asked to mark the point on each Likert scale that would best reflect their perception of how close or how far the students' performance was from that of a native speaker's. Once the raters completed this portion of the evaluation, the Likert scales in the questionnaire were measured to quantify the opinions of the judges for each item.

Results of the Nativeness Test

As mentioned earlier, each rater had to indicate his/her perception of the subjects' speech on the Likert scale where the upper limit indicated performance as akin to that of a native speaker, and the lower limit indicated a performance like that of a foreign speaker of Spanish. Consistently, all three raters seemed to consider the performance of the UBI students closer to a native speaker, and in each of the categories, the ratings given to the control group and the experimental group were statistically significant (i.e., Speaker's pronunciation T-student = 0.001; Time that the speaker takes to articulate an idea, T-student = 0.00335; Number of pauses T-student = 0.00124; Control of grammar T-student = 0.00368; Vocabulary used T-student = 0.00002; Ease of speech T-student = 0.0013; Overall impression of fluency T-student = 0.000019).

Table 1 shows some of the results of the Nativeness Test, specifically regarding the evaluators' judgments of perceived fluency.

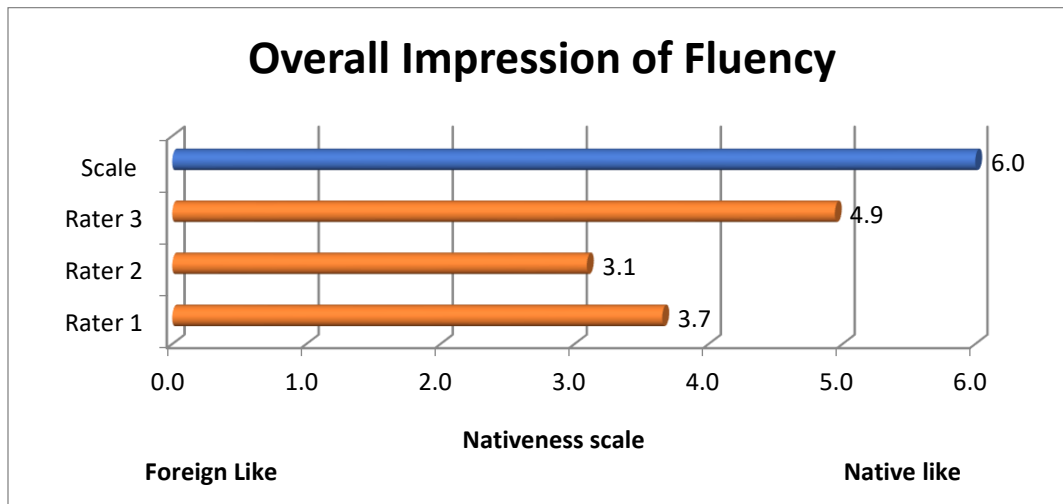


Table 1: Overall Impression of Fluency

However, when evaluating the Inter-Rater Reliability (IRR) of these three raters, we found that it was unexpectedly low (IRR = 57%), which could be attributed to the raters' dialectal differences or lack of experience working with second language learners. This motivated further testing of UBI students, this time, employing language education professionals who were familiar with methods of proficiency assessment (including the OPI) and worked in educational settings.

Evaluation based on the ACTFL Performance Descriptors

The goal of the second part of the evaluation was to obtain more robust and consistent judgments of students' performance in terms of the ACTFL Performance Descriptors. For this purpose, two additional external raters were recruited through the ACTFL SIG Group of Spanish Heritage Speakers—a forum for academic conversation and professional exchange amongst Spanish instructors in high school and higher education settings. The raters were two Spanish language instructors: a Spanish university professor with a terminal-level academic degree, and a high school teacher. Both raters were familiar with the OPI and had experience applying it in instructional settings.

The raters did not have any contact with each other, nor were they familiar with the UBI methodology, or the testing criteria they would use to evaluate our students' performance. The raters were asked to listen to the audio files and to fill out Oral Performance Rubrics Template developed on the basis of the ACTFL Performance Descriptors (ACTFL Performance Descriptors for language learners, 2012). The template listed eight questions pertaining to the description of the intermediate range of performance in interpersonal mode, with the last question asking the rater if the student's performance could be rated at the Intermediate Level: "Can the student carry out tasks at the Intermediate Level?"

The raters had to indicate if the students performed the function matching the question (e.g., "Could the student speak at a normal rate or be easily understood by native speakers?") most of the time, often, occasionally, or rarely, in their interviews.

Results of evaluation based on ACTFL Descriptors

To facilitate the quantification of the ratings, we grouped the qualitative descriptors into proportional percentages:

- Most of the time - 100%
- Often - 80%
- Occasionally - 60%
- Rarely - 40%

The results of the ratings for each question are provided below:

Question 1: Can the student use sentences or strings of sentences?

IRR: 71%

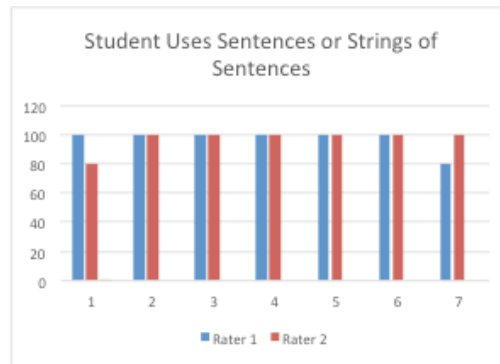


Table 2 Student Uses Sentences or Strings of Sentences

Question 2: Can the student express personal meaning by creating with the language?

IRR: 100%

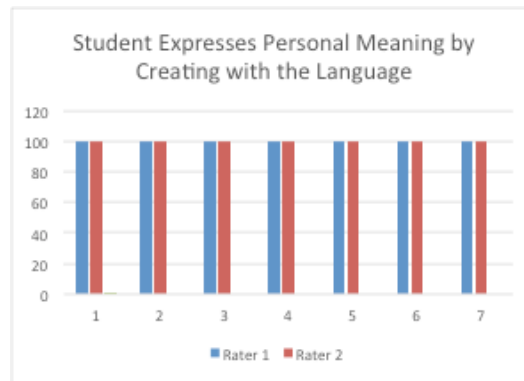


Table 3 Student Expresses Personal Meaning by Creating with the Language

Question 3: Can the student communicate in contexts relevant to themselves?

IRR: 100%

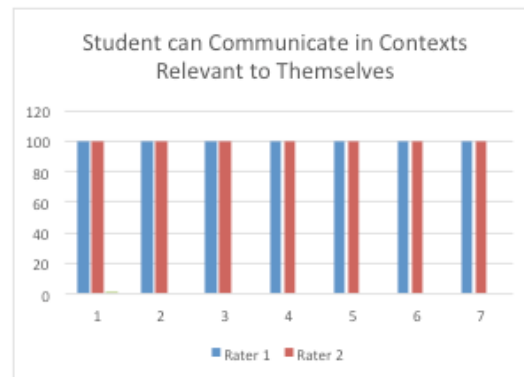


Table 4 Student can Communicate in Contexts Relevant to Themselves

Question 4: Can the student understand the interviewer's questions?

IRR: 71%

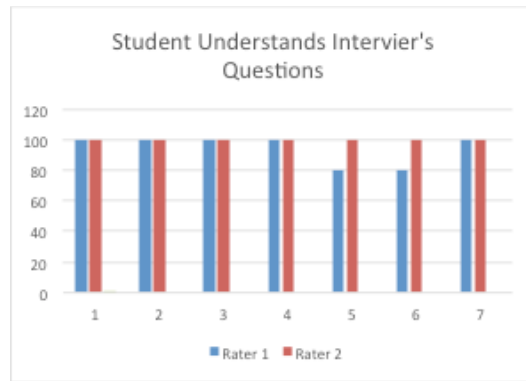


Table 5 Student Understands Interviewer's Questions

Question 5: Can the student speak at a normal rate?

IRR: 57%

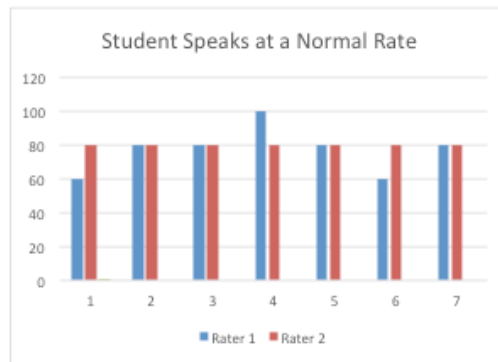


Table 6 Student Speaks at a Normal Rate

Question 6: Can the student speak with ease without hesitations and self-corrections?

IRR: 86%

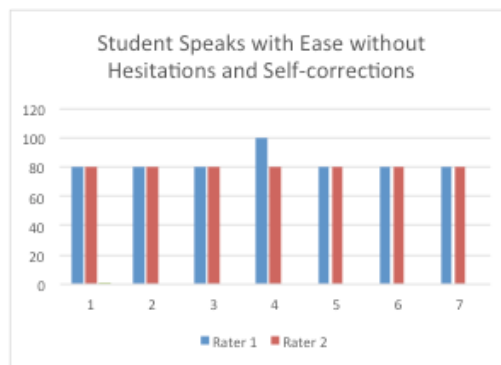


Table 7 Student Speaks with Ease without Hesitations and Self-Corrections

Question 7: Can the student be understood by native speakers?

IRR: 100%

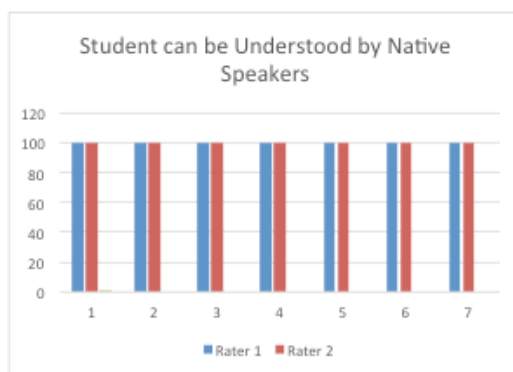


Table 8 Student can be Understood by Native Speakers

Question 8: Can the student carry out language tasks of the Intermediate Level?

IRR: 71%

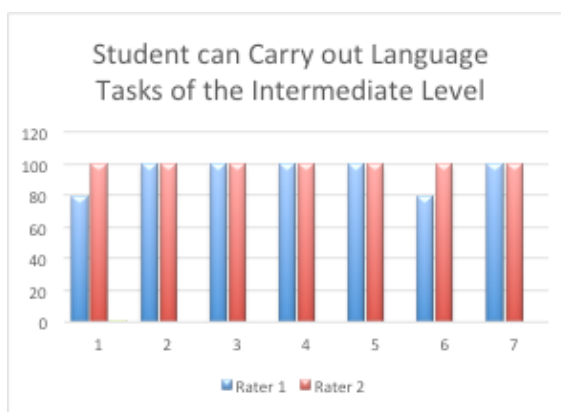


Table 9 Student can Carry out Language Tasks of the Intermediate Level

The results of the second evaluation by two external judges with a robust averaged IRR of 82%, revealed that the students could carry out language tasks at the Intermediate Level of performance (IRR 71%), that is, they could use sentences or strings of sentences (IRR 71%); they could understand the interviewer's questions (IRR 71%); and they could speak at a normal rate (IRR 86%). Both raters also demonstrated a high percentage of agreement when assessing students' ability to use sentences or strings of sentences, to understand the interviewer's questions, express personal meaning by creating with the language, communicate in contexts relevant to themselves, and be easily understood by native speakers.

As it can be observed from tables 2-9, both raters seemed to be mostly in agreement about the participants' performance, while assessing them in the middle to upper portion of the charts. In three questions, the raters demonstrated perfect IRR reliability, and in the remaining five questions, this percentage of agreement was also sufficiently high. However, one point on which the judges seemed to disagree in their assessment was the question about whether participants could speak with a normal rate (Question 5, Table 6), in which the IRR is only 57%. These judgments are somewhat puzzling when considering the fact that the raters were generally in agreement that UBI students could speak with ease and without hesitations and self-corrections (Question 6, Table 7). A possible explanation may be related to the subjective perception of "normal" rate of speech, where the listener's judgments seem to be tied to their own speaking habits (Koreman, 2006). This item would need to be reconsidered and/ or reformulated in a larger scale study. Nevertheless, the average of IRR scores is 82%, even when including Question 5, which, considering the added factor that these raters did not meet nor discuss their evaluation criteria before participating in this study, gives us strong confidence in the accuracy of these findings.

Discussion

This study described an attempt to evaluate the impact of UBI methodology, and instructional sequence based on the main tenets of usage-based concept of language acquisition, on fostering students' ability to orally communicate in L2 by means of course evaluation, that is, establishing the students' level of oral performance at the end of the course. Performance is described by the ACTFL Performance Descriptors (2012) as "the ability to use language that has been learned and practiced in an instructional setting... [and] refers to language ability that has been practiced and is within familiar contexts and content areas ..."; although performance is not the same as proficiency, the "demonstration of performance within a specific range may provide some indication of how the language user might perform on a proficiency assessment" (ACTFL, 2012, p. 4). The ratings that a language learner receives on performance assessments may be able to predict how the learner will be rated on an assessment of proficiency.

The above provided us with the rationale for comparing the results of our study with the studies that investigated college students' attainment in speaking in terms of the ACTFL Proficiency Guidelines. The existing studies of beginning levels of instruction provide a wide range of levels of proficiency from Novice Low to Intermediate High (Magnan, 1986; Moeller & Reschke, 1993; Norris, 2006; Thompson, 1996; Tschirner & Heilenman, 1998) with only one of these studies—by Tschirner and Heilenman (1998)—taking into account the number of hours/ semesters its participants had received prior to being enrolled in the university/ college courses. This particular study revealed that the majority of students with a year, or less, experience of studying German at high schools reached the modest Novice-High Level of oral proficiency after four additional semesters at the Iowa University.

This makes the results of our study describing students' achievement after 80 hours of instruction, particularly impressive since none of the seven students participating in it had taken more than one year (two semesters) of Spanish in high school, as already mentioned.

We attribute this efficiency of the UBI approach to a number of factors. These include the following:

1. In teaching students to orally communicate in a foreign language, the UBI employs constructions as units of learning. These constructions, of which the psycholinguistic reality in language processing and learning has been demonstrated empirically, allow instructors to:
 - a. teach all aspects of the language in unison;
 - b. avoid more time-consuming componential treatment of language;
 - c. focus on the immediate connection between meaning and form, without the intermediacy of grammatical rules, and thus better meeting students' needs who, in studying a language, primarily seek to acquire label-meaning relations and do not care much about the linguistic descriptions (Ellis, 2001);
 - d. eventually, as a result of the above, free up more time for communicative practice, with less time spent on building up linguistic competence.
2. The UBI instructional sequence targets the level of linguistic encoding, specifically, the level at which thought becomes language so often neglected by today's foreign language theory and practice with its focus on meaning and communication;

Based on the usage-based premise about language being learned by essentially the same cognitive mechanisms as any other learning, the UBI instructional sequence relies on such important cognitive categories as memory, automatization, iteration, imitation, associative learning, as well as some ideas which, according to general learning theory, facilitate learning (e.g. Gagné's [1985] sequenced instruction, and Bloom's concept of mastery learning).

Taken together, these factors, as we have tried to show, increase the rate of learning and let students experience tangible results of their efforts sooner than they do in a more traditional course. As mentioned earlier, students with less than one year of prior experience of learning a foreign language in Tschirner and Heilenman's (1998) study took two years to achieve the modest Novice-High Level of proficiency at the university. In this study, a similar level of performance was reached after just one year of instruction. An increased rate of learning is especially beneficial for the students who, like our students, are not required to take a foreign language course to complete their Bachelor's degree but take it as an elective. In such circumstances, students usually have no more than one or two semesters that they can afford to spend on foreign language study, and so, providing students with tangible communicative skills becomes an important matter as the program's reputation and its survival depend on it.

This discussion also brings up the motivational factor as a possible variable that allows the success of UBI methodologies. Given that students in the case study have opted for taking Spanish as an elective, there is already a strong motivation factor that will help in the foreign language acquisition process (Ellis, Wray, & Ryan, A., 1997; Taylor, Meynard, & Rheault, 1977). However, the high motivation that students exposed to UBI have may be comparable to that of students in more traditional methods, who persevered for at least two years to attain intermediate conversational level. From this perspective, motivation in our case study does not appear as a prominent factor that would distinguish our sample from others.

We foresee that the main criticism against the UBI would address its similarity to the audio-lingual approach, with its emphasis on repetition of patterns. Indeed, as Ellis (2002) notes, constructions are very much akin to Lado's patterns in the audio-lingual approach, the failure of which Ellis attributes to fashion: the decline of behaviorism led to the field's loss of interest in automatization through repeated experience and learning of larger units based on the facility of using smaller units. It is important to note, however, that a significant reason for the failure of the audio-lingual approach is that automatization in traditional (non-communicative) methodologies was geared toward the mastery of specific structures or rules, not of utterances as such. The drill required learners to focus on grammatical forms almost exclusively, and ultimately, the system failed to promote learning because of the highly decontextualized nature of the repeated material. This article has presented a case study that has undergone two different assessment stages, both of which reported students to be in the Intermediate Level of oral performance in Spanish after going through only 80 hours of UBI instruction. Given the small scope of the study, these results can only be generalizable for the instructional context we described at the beginning of the article. We hope, however, that this article is an opening door for further, larger scale studies, where the implementation of UBI is tested in terms of attainment of oral performance in a larger number of students.

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APPENDIX: Sample lesson plan

Class objectives: Saying when and where you have had, and like to have, meals.

I. Saying when you usually have your meals

Focused Input activities

On the slide are pictures representing expressions: *I have breakfast. I have lunch. I have dinner. I have a snack* with the time indicated in captions.

Note: L2 expressions are **not** written underneath the pictures; the emphasis is on establishing associations between the phonological form and the meaning.



1. Watch and listen as the instructor points to the picture and says *I have breakfast. I have lunch. I have dinner. I have a snack* in Spanish. Try to guess which of the four phrases each picture indicates.


For example:

Instructor (pointing to ): *desayuno a las 7 am*

2. One of you will come to the board. You will hear a phrase in Spanish. Point to the picture that matches the phrase.

For example:

Instructor: *almuerzo* (Note: at this time the instructor uses expressions without indicating the time to make phonological features of new expressions more salient for the students)

Student at the board points to  while others are watching or are asked to indicate if the choice was correct with a thumb up/down gesture.

On the slide are the same pictures. This time they are numbered. Students have cards with the numbers.

3. You will hear a phrase. Raise the card with the matching number




For example:
 Instructor: *almuerzo*
 Students raise the card with the number 4

Forced choice activities

1. I will point to one of the pictures. You will hear two phrases. Repeat the one matching the picture.
 For example:
 Instructor (pointing to the picture representing *I have a snack*): *almuerzo o meriando?*
 Student 1: *meriendo*
 Instructor (pointing to the picture representing *I have breakfast*): *desayuno o meriendo?*
 Student 2: *desayuno*
2. You will hear two phrases. Repeat the one indicating a meal you eat earlier during the day
 For example:
 Instructor: *almuerzo, desayuno*
 Student 1: *desayuno*
 Instructor: *almuerzo, ceno*
 Student 2: *almuerzo*

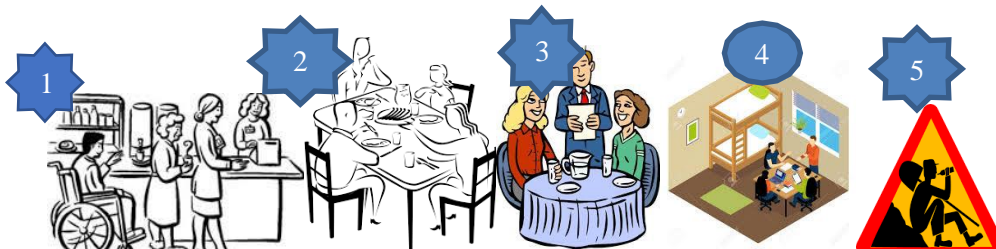
Production

1. I will point to the picture, say the matching Spanish phrase.
 For example:

 Instructor points to
 Student 1: *desayuno*
2. Now say when you usually have your meals during the day.

II. Saying where you usually have meals

On the slide are pictures representing places where students may have their meals (dormitory, at home, at work, at the cafeteria, in a restaurant)

1. Watch and listen as your instructor points to the pictures and says where he/she has breakfast, lunch and dinner



For example:

Instructor points to  : *A veces cenamo en un restaurante*

- I will point to one of the pictures. You will hear a phrase. Point your thumb up if the phrase matches the picture. If it does not, point your thumb down.

For example:



Instructor (pointing to ): *en la cafetería*

Students point thumbs up

- You will hear a phrase, hold up the card indicating the number of the matching picture on the slide

For example:

Instructor: *en la cafetería*

Students raise the card with number 1

Forced choice activities

- You will hear two phrases indicating places where one might have dinner. Repeat the one indicating a place where you would rather have dinner on Sunday

For example:

Instructor: *en la cafetería or en casa?*

Student 1: *en la cafetería*

Student 2: *en casa*

- Select what best describes you. Read the sentences to your partner.

For example:

- Usually I have breakfast (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- Usually I have lunch (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- Usually I have dinner (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- On weekends, I have breakfast (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- On weekends, I have lunch (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- On weekends, I have dinner (at home, in the cafeteria, at work, in the dormitory, in a restaurant)*
- Usually I (do not) have a snack (in the morning, in the afternoon, in the evening)*

Production

- I will point to the picture; say the corresponding Spanish phrase

For example:



Instructor points to:

Student: *en casa*

- You can now say where and when you usually have your meals. (Students work in pairs). Share this information with your partner. Prepare to report what you have found out.
- Say what you found out. In order to do this, you will need to say (note that the form of the verb has to change when you talk about your classmate!).

El/ ella desayuna...

El/ ella almuerza...

El/ ella cena...

Él/ ella tiene merienda...

As you listen to your classmates, fill out the table with the information you are going to hear.

- Now watch and listen as I answer the following questions

¿A qué hora almuerzas en general?

- ¿Almuerzas todos los días?*
 - ¿Dónde almuerzas?*
 - ¿Con quién almuerzas?*
 - ¿El fin de semana dónde almuerzas?*
 - ¿A qué hora cenas en general?*
 - ¿Con qué frecuencia almuerzas en un restaurante?*
 - ¿Con qué frecuencia almuerzas en la cafetería de la universidad?*
 - ¿Desayunas o almuerzas en la cafetería de la universidad alguna vez?*
 - ¿Alguna vez cenas con tus amigos de la universidad?*
 - ¿Con qué frecuencia cenas con tu familia?*
 - ¿Con qué frecuencia desayunas en un restaurante?*
 - ¿Cenas en un restaurante los días hábiles?*
 - ¿Cuántas veces meriendas?*
5. Your turn: answer my questions.