

# Development of second language through computer games english language essay

[Linguistics](#), [English](#)



While discussing the role of computer games in learning a second language; psycholinguistic, and sociocultural approaches to second language acquisition are noteworthy to consider. First, psycholinguistic approaches to second language acquisition deal with the mental processes involved in learning phonological, lexical and morphological systems of language (Foster & Ohta, 2005). Psycholinguistic approaches would be concerned with how the brain processes sounds, words, sentences and makes sense of the language input received. Sociocultural approaches, on the other hand, view language learning as mediated through social interactions (Lantolf, 2000; Lantolf & Thorne, 2006). Interaction with the knowledgeable others or tools and artifacts is central to the idea of mediation within the purview of the sociocultural approach. When applied to language learning through games and/or computer simulations, collaborative dialogue and negotiation of meaning on game based language learning tools constitute common activities learners are engaged in (Peterson, 2010). Unlike the sociocultural approach, psycholinguistic perspective to language acquisition focuses on internal mental processes in learning a second language and what conditions need to be created or provided in order to fully activate learners' language learning. One of the optimal conditions is that language learning activities in a game situation should be goal-driven communicative activities (Gass, 2000). In order for engaged communication to happen, it is critical that comprehensible target language input is provided which then stimulates output through interaction and negotiation around meaning. Negotiation of meaning then becomes the central activity especially in a game based language learning environment whereby learners or users are exposed to

comprehensible target language input and are engaged in communicative tasks driven by goals to produce and negotiate meaning (Peterson, 2010). Sociocultural approach to game based language learning illuminates the perspective that language learning is mediated through social interaction and the use of tools. Through this perspective to designing game-based language learning tools, there will still be negotiation of meaning, comprehensible target language input as conditions but additionally, the design should incorporate features to incorporate collaborative peer dialogue (Ang & Zaphiris, 2007). According to Thorne (2008), peer dialogue as a feature on game-based language learning tool allows for second language socialization anywhere and not just restricted by the conventional school contexts where peers would typically be allowed to interact and negotiate meaning. When considering or evaluating these approaches to second/foreign language acquisition in relation to game-based language learning tools and the game design issues, one also needs to have an understanding about what it means to learn a language to get to a stage where the learner could communicate and negotiate meaning.

## **Overview of language competency**

What does it mean to be proficient in a language? What does it take to develop competency in the grammatical, lexical, syntactical, sociolinguistic, cultural and discourse aspects of language? These questions inherently tap into notions like ability, expertise, or competence. In the field of second language acquisition, the term ‘competence’ was explicitly distinguished from ‘performance’ at the time when Chomsky (1965) defined ‘competence’ as implicit or explicit underlying knowledge of the system of

the language, while performance referred to actual production or comprehension of language. Competence versus performance distinction led to distinguishing between communicative competence and grammatical or linguistic competence. Lin (1998) discusses that Canale and Swain (1980a) did not conceive the distinction between communicative and grammatical competencies as dichotomous but rather included grammatical competence as a dimension integral to communicative competence as they related in the following: "...it is common to find the term 'communicative competence' used to refer exclusively to knowledge or capability relating to rules of language use and the term 'grammatical competence' used to refer to rules of grammar..." (as cited in Lin, p. ). Savignon (1972) also incorporated linguistic or grammatical competence as part of communicative competence with the argument that linguistic competence gets to function with the dynamics of a communicative setting or situation. The point Savignon emphasized further, which is central to the discussion in this paper, is that successful language learning and communication in the foreign language would depend on the learners' resourcefulness in using the grammatical structures and vocabulary at their disposal to comprehend and be comprehensible to others, as well as their willingness to take risks to express themselves in the foreign language. Savignon (1983, 1997) later highlighted the 'interpersonal' aspect of comprehending others and being understood. Included in the interpersonal aspect of communicative competence is the activity in which two or more people negotiate meaning through oral or written communication. Central to communication and communicative competence is meaning. Once the intention or purpose to communicate is

explicitly or implicitly stated, the meaning unfolds through the use of language. For instance, in a communicative classroom as Larsen and Freeman (1986) claimed, "almost everything that is done is done with a communicative intent" (1986, pp. 132). That is, the communicative intent should be driven by an authentic and genuine communicative need in possible realistic situations. Therefore, an EFL learner should be able to find him/herself in realistic situations in which the expectation would be to use English language and strategies of communication as approximated to the native speakers' use of the language. In short, in settings where English is learned as a foreign language, the state of being 'proficient' is characterized by the ability to comprehend, be comprehended, and communicate meaning. This implies that in order for language proficiency to develop, the parties involved in communication need to have an intent to convey meaning, not just use the grammar or vocabulary of the second language for the sake of practice. If an authentic and realistic language learning situation drives the intent involved in communication of meaning, the need to convey meaning is enhanced which substantially differs from just the practice of grammar and vocabulary structures. The language learning processes take time to develop and maintain at a working level of proficiency. As an EFL learner develops language proficiency, she/he learns to comprehend the speakers of English and to be comprehended by them while communicating meaning, experiences, or ideas. The question of what it means to know a language can be taken from a perspective of standards that circumscribe the notion of proficiency. Standards for foreign language learning that were developed by the American Council for the Teaching of Foreign Languages (ACTFL) (2000)

have taken the vision of language learning beyond acquiring the linguistic system of a foreign language and shed light on diverse foreign language learning situations and contexts which are important to consider in the discussion of what it takes to learn a foreign language. Five major goals are conceptualized in the content standards for foreign language learning and education. These goals are communication, comparisons, connections, cultures, and communities (Omaggio Hadley, 2001). Each one of the standards provides a significant lens to understanding that students learn language to exchange information, ideas, feelings, opinions (Communication); to demonstrate their understandings of their native language and the language, and culture studied (Comparisons); to make connections to the bodies of knowledge in various disciplines through the foreign language (Connections); to demonstrate understandings of the cultures, perspectives, and practices of the language they are learning (Cultures); to be able to participate in the communication in multilingual communities at home and around the world (Communities). Although these ACTFL goals may not apply to locally developed standards, they provide the roadmap for the ultimate use of language skills being acquired. In the process of acquiring language skills, integration of four skill areas (reading, writing, speaking and listening) become central to achieving the standards laid out above. These skill areas accommodate different modes of communication such as interpersonal, and interpretive. In each mode of communication, language learners get to use receptive and productive skills. That is, while demonstrating receptive language skills in listening to an instruction on a computer game and/or reading a story, learners comprehend

and interpret the audio, textual input received. So, receptive skills essentially refer to the interpretive mode of communication. Productive skills are demonstrated when learners engage in communicating ideas, emotions and experiences orally or in writing. Once productive and receptive skills are integrated in a language learning situation, learners could not only comprehend and interpret comprehensible auditory or textual input but also could communicate ideas, emotions, feelings orally and in writing. Moreover, integration of receptive and productive language skills in language learning involves the integration of interpretive and interactive or interpersonal modes of communication. The interpersonal mode of communication refers to two-way interactive communication (National Standards, 1999).

Interpersonal communication may be either oral or written. The oral communication has certain characteristics such as spontaneity, and having a communicative reason. Because of the spontaneity involved in oral interpersonal communication, speakers listen to each other and try to interpret what is being said. It also involves negotiation of meaning between speakers as they exchange information. That is, speakers ask for repetition, clarification, or confirmation, or misunderstanding and lack of understanding (Pica, Holliday, Lewis, and Morgenthaler, 1989 as cited in Hauck et al, 2006).

The interpretive mode of communication is primarily a process in which language learners are engaged while constructing meanings from the information presented in a written text (reading), oral discourse (listening), or a film (viewing). Interpretive tasks involve activities such as listening to a news broadcast or radio commercial; reading an article in a magazine, a short story, or a letter; and viewing a film (Hauck et al., 2006, pp. 367).

According to Hauck et al (2006), receptive skills and interpretive mode of communication involve several operations such as literal comprehension of the information given in a text and interpretation of the extracted textual information with prior knowledge. This process involves recognizing words, phrases and sentences, and meanings of individual words. That is, comprehension and interpretation of written or auditory input does not only involve inferring or extracting meaning from text but also constructing meaning from the text by drawing upon schematic or background knowledge. The combination of both interpersonal and interpretive modes and skills present foreign and second language learners with opportunities to make connections between inputs or ideas gathered from a written or audio text and exchange information with other speakers either through oral or written activities. This not only serves the broad foreign language learning standards, namely Communication of ideas, perspectives and understanding different perspectives of the target Culture, and making Connections to a literary text within the target culture but also taps into creating a sense of Community with other speakers of the foreign language. In all this discussion about the development of foreign/second language proficiency, the role vocabulary learning plays is an important one to consider. Thus, the next section first presents ways of teaching or learning vocabulary and then discusses how engagement in particular receptive or productive skills (reading, listening, speaking and writing) is an important factor in the amount of exposure needed for learning vocabulary.



## **Vocabulary learning**

Vocabulary knowledge has been considered to be influential in English as a second language / English as a foreign language (ESL/EFL) reading, writing, listening comprehension, and speaking skills (Laufer, 1997; Beck and McKeown, 1991; Carroll, 1993; Cunningham and Stanovich, 1998; Perfetti, 1994). Effective enhancement of vocabulary acquisition and retention in English has certainly been an area of research. Two ways of acquiring and teaching vocabulary have been examined. One way of acquiring vocabulary in second or foreign language learning is direct or explicit vocabulary instruction and the second way is incidental vocabulary learning. Direct vocabulary instruction and acquisition incorporate repeated and systematic teaching of selected content vocabulary and learning strategies which may involve discretely learning the words through memorization or isolated from the context of use in real communicative situations. For some researchers, direct vocabulary instruction not only support second/foreign language learners' vocabulary learning but also comprehension of text in reading (Beck, McKeown, and Kucan, 2002; McKeown and Beck, 1988; Snow, Burns, and Griffin, 1998). The other claim is that direct exposure to words with or without contextual cues may help students learn difficult words especially if they represent complex concepts that are not part of students' everyday lives and experiences. However, reporting the case of an EFL context, Taiwan; Min (2008) points out that direct vocabulary instruction does not help to prepare students for acquiring the basic vocabulary size that most textbooks demand at EFL secondary high schools. Min discusses that direct word-focused instruction should be supplemented with reading which is

defined as the 'enhanced condition' referring to "reading plus word-focused activities, and the normal condition refers to extensive reading" (p. 74). The idea behind supporting direct vocabulary learning with reading comes from the claim that English Language Learners need to actively engage in rich and authentic experiences with text and, therefore, learn vocabulary as extensive reading is instrumental to helping them become independent learners and explorers of words (Brown 2000; Day and Bamford, 1998; Krashen, 1993; Nation, 1990 as cited in Min, 2008, p. 74). Along the same lines, there have been several investigations to support the belief about reading and indirect vocabulary learning, including Saragi, Nation and Meister (1978), Jenkins, Stein, and Wyoski (1984), and Nagy, Anderson, and Herman (1987). The evidence shown in these studies pointed out that children learn new vocabulary through engaging in receptive skills like listening and reading, the reason being that children learn vocabulary incidentally or indirectly in context while reading. This strand of research bases the argument on input-oriented language acquisition theory and claims that learners process meaningful and contextualized input from reading a text and are able to connect meaning with the form or structure of language. However widely agreed that reading is resourceful for acquiring vocabulary, there are concerns about the number of exposures needed for learners to successfully acquire vocabulary through reading. It is also debated that learners may not effectively infer meaning of unknown words during reading. So, incidental vocabulary learning through reading has been challenged and compared to effectiveness of coupling reading with explicit vocabulary instruction (Min, 2008) and applied in instructed foreign language

context (Laufer, 2003). For instance, Laufer (2003) conducted three experiments. In the first experiment, she compared two groups' retention of 10 unknown words. One group was the "reading only group" that read new words in context with glosses in the native language on the margin. They then answered comprehension questions. The other group was the "sentence writing" group that wrote sentences with the 10 target words. The equivalents of these words were provided for students in their native language (L1). In the end, the writing group scored significantly higher on the immediate and delayed definition-supply task than the reading only group. The second experiment compared the reading group with a composition group that was asked to compose a letter using 10 target words. The composition group was found to recall more word meanings than the reading group. The last experiment was conducted with three groups. The first group read a text and was allowed to look up unfamiliar words in their bilingual dictionaries, while the second 'sentence writing' group wrote sentences along with the L1 translations using the target words. The third 'sentence completion' group was asked to fill in each blank in 10 sentences with an appropriate word. Results indicated that sentence completion or sentence writing groups recalled significantly more words than the 'reading group' both on immediate and delayed tests. This study implies that second language learners acquire vocabulary more effectively when there is a task associated with the reading text that involves the use of target vocabulary. Put in other words, reading only may not lead to effective vocabulary acquisition. However, when reading is combined with a productive word-focused task, learners could be expected to recall more words than those

engaged in just receptive reading or listening tasks. The discussion about the effectiveness of vocabulary acquisition through explicit or incidental learning should also consider the question of how much exposure is sufficient in learning vocabulary. Next, we take on the discussion around this question from a perspective arguing that the particular linguistic modality through which the learner gets to use and learn vocabulary (reading, listening, speaking and writing) determines the amount of exposure needed for learning vocabulary.

### **How much exposure is sufficient in learning vocabulary?**

In particular relation to vocabulary learning in a foreign language, two distinctions help to determine the extent to which exposure is influential in students' acquisition of vocabulary in a foreign language. One is explicit vocabulary learning while the other is incidental vocabulary learning. The extent and amount of exposure needed to acquire vocabulary to ideally use in communication is contingent on one main consideration in relation to explicit versus incidental vocabulary learning. Specifically, one needs to consider how the particular linguistic modality (i. e., listening, reading, speaking, and writing) identifies the particular orientation to vocabulary learning; i. e., explicit or incidental vocabulary learning. Depending on the modality under which the learner is exposed to vocabulary learning, the effectiveness and amount of exposure needed for successful learning varies. Explicit vocabulary learning in a foreign language implies exposure to vocabulary through rote instruction in the classroom and/or strategy instruction. Depending on the specific skill that vocabulary is going to be

used for, the explicit exposure to vocabulary might be useful. For instance, in writing, Duin's (1983) study found that explicit vocabulary instruction results in greater "word awareness." That is, learners become more conscientious of the use of contextually appropriate words thereby influencing them to pay more attention to word choices in subsequent writing, thus enriching the content and improving sentence structure. When it comes to reading, the use of explicitly learned vocabulary may not always help the learner make the vital connections between the context and the dictionary meaning of the word. Likewise, in the speaking and listening modes of communicating in a foreign language, learners may not benefit a lot from the explicitly learned vocabulary no matter how much exposure they receive. Therefore, the amount of exposure to explicit learning of the target words in the linguistic modalities like reading, listening, and speaking would be substantially more than the amount of exposure to explicit learning of certain words in writing. As for learning vocabulary in a foreign language implicitly or incidentally, the amount and effectiveness of exposure has been questioned (Cho and Krashen, 1994; Horst, Cobb, and Meara, 1998). However, this questioning should be done in relation to the particular linguistic modality (i. e., listening, speaking, writing, and reading). Most of the studies covered incidental vocabulary learning in the modality of reading and found links to support the belief that reading and incidental vocabulary learning are closely associated (Saragi, Nation, and Meister, 1978; Jenkins, Stein, and Wyoski, 1984; Nagy, Anderson, and Herman, 1987 as cited in Day, 1991, p. 541). These studies found evidence indicating that children could learn vocabulary indirectly or incidentally in context while reading. In fact, Nagy, Anderson, and Herman

(1987) pointed out that the results "demonstrate beyond reasonable doubt that incidental learning of word meanings does take place during normal reading" (pp. 261). For instance, reading storybooks to young children has been shown to be an ideal means of introducing them to new words and effectively retaining them (Beck and McKeown, 2001; De Temple and Snow, 2003). In the case of learning new vocabulary through storybooks, the learners may not need too much exposure to learn and retain vocabulary. Likewise reading aloud, which refers to auditory exposure to vocabulary, has been recommended as another way to get at incidental vocabulary learning in a second or foreign language. Research on vocabulary instruction during read-alouds suggests that vocabulary instruction through read-alouds should actively engage children in defining, discussing, manipulating, experiencing, saying, and spelling words (Beck and Mc-Keown, 2001; Beck, McKeown, and Kucan, 2002). With this much engagement, it is quite certain that learners may not need too much exposure in order to retain the target vocabulary. Vocabulary learning plays an important role in the bigger picture of learning a foreign/second language in order to get at the larger standards of communicating ideas, negotiating meaning, and being part of a community of speakers of a particular language. However, as it was argued in the previous section that vocabulary learning is effective when integrated within one or two of the receptive and productive skill areas that promote using interpersonal or interpretive modes of communication. In a game-based language learning environment, the interpersonal and interpretive modes of communication could be incorporated by exposing the learners to comprehensible and interactive stimuli and by providing opportunities to

perform authentic or meaningful language-related tasks. As the sociocultural orientation to game design would advise, the tasks could very well be collaborative or interactive in that language learning could be mediated through interactive and peer-dialogue game tasks. Through establishing these larger conceptual design principles, learners would be expected to develop rich lexicon while being engaged in receptive and productive skills that allow them to receive, interpret, and respond to comprehensible input or stimuli. Game-based learning environment could mediate the performance of the tasks involved in the larger goals of developing proficiency in a foreign/second language and becoming part of the community of speakers of the particular language.