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The importance of listening input from a psycholinguistic point of view

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Abstract

Language learning has explored many areas for its acquisition and storage to achieve a wider knowledge from previous knowledge when perceived and it transforms from a memory to a whole connected speech. There are two main strategies when teaching listening that are very important to take into consideration to activate prior knowledge, so that the student can create new information, and the guessing of new content that has not ever been heard previously by the listener, sometimes basing on independent word knowledge. This study aims to examine the different mental processes that occur when a person receives listening input and how those sounds become words that will later become function words with a definition that will get not only semantic and syntax, but pragmatic meaning. It is not simple to fully understand what an utterance is transmitting when a learner listens to it (a sound) and transforms it into actual world knowledge.

Key Words: Listening, input, psycholinguistics.

La importancia del input en la comprensión auditiva desde un punto de vista psicolingüístico

Resumen

El aprendizaje de idiomas ha explorado muchas áreas para su adquisición y almacenamiento para lograr un conocimiento más amplio del conocimiento previo cuando se percibe y se transforma de un recuerdo a un discurso completo conectado. Hay dos estrategias principales a la hora de enseñar a escuchar que son muy importantes tener en cuenta para activar los conocimientos previos, de manera que el alumno pueda crear nueva información, y predecir nuevos contenidos que nunca había escuchado el oyente, a veces basándose en el conocimiento de palabras independientes. Este estudio tiene como objetivo examinar los diferentes procesos mentales que ocurren cuando una persona recibe información de forma auditiva y cómo esos sonidos se convierten en palabras que luego se convertirán en palabras funcionales con una definición que obtendrá un significado no sólo semántico y sintáctico, sino pragmático. No es sencillo comprender completamente lo que transmite un enunciado cuando un alumno lo escucha y lo transforma en conocimiento real del mundo.

Palabras clave: Comprensión auditiva, psicolingüística, exposición (input).

Introduction

There are some English schools that regularly focus on certain skills, depending on the students' necessities. For example: a school's poster had: "we teach you to read and write in English" written on it. Does something occur if students are not exposed to listening input? It is very important for a human being to listen.

Problem of study

The aim of this study is to conduct an investigation about the effectiveness produced in the listening input that L2 learners are exposed to in the learning process. Some people seek English for specific purposes which implies reading and writing in English; when a student is not exposed to listening input, there is a lack of acquisition. This research will explain why listening is vital and very important in a student, and if students who are not exposed to listening get a lower understanding of the language. It will identify the most significant aspects in psycholinguistics, TESOL, language acquisition, neurolinguistics, listening, etc. to measure the knowledge acquired passively when receiving listening input in an English class and how important it is for students to receive input so that students learn to listen, and they listen to learn.

Research questions

- a) What is the main function of psycholinguistics in TESOL?
- b) How does the input reflect on language acquisition?
- c) What makes listening input special?
- d) What are the neurolinguistic and psycholinguistic processes involved in the listening input for language acquisition?
- e) Do Psycholinguistics change the listening input exposed in TESOL?
- f) Does psycholinguistics modify the input received?

Why should teachers find Psycholinguistics and its relationship with input interesting?

Psycholinguistics influence a lot the mental processes that are involved in language acquisition from a sound until it becomes a semantically well-structured sentence. It has been very common that people don't know how to explain something, they rather stay with the explanation that everything they say has been heard through listening input by them is their argument to explain that its "sounds" good. So, it has been studied the main reason why listening input is so important and interesting. There are schools that always include courses



that only teach reading and writing, some others only listening and speaking. My topic would take a point of view on the listening input, how a sound results in a word which gets into our minds through a memory that can acquire meaning.

Something so simple results in a process that results in an interesting study on the psycholinguistic field and how language is stored, and the process to remember those meanings and transform them into concepts that are statically based in our memories and bring them back to acquire new information from the old one to get the puzzle together and achieve a more complete domain in the target language. It is very interesting to know how those passive skills are being formed, and it has been demonstrated that these processes will always be unnoticed. When the learner listens to words, there is not a specific moment where the student is aware of the steps that are happening when being exposed to the target language, but to know the explanation will help people understand why it happens and not only answering a typical "Why is language used like that?" with a "I'm not sure I have heard it that way".

Research synthesis

Psychological implications within language acquisition

Research has proved that there are psycholinguistic and neurolinguistic implications when students listen to a word and identify the various processes that occur for it to be understood. When a learner is exposed to reading input similar processes happen, but there is something that makes listening so special and its importance and when used in an English class it becomes vital.

Human brain and mental processes

The human brain is divided into several parts to understand all their functions; upper vs. lower parts, left vs. right hemisphere, and front vs. back regions that are in charge of different uses. There are three important parts that involve the brain and language which are: comparison with other living beings, localization arguing that it does not matter the intelligence or learning style, and lateralization with the implementation from left and right hemisphere. Where do mental processes start storing and acquiring language?

Research says that there are mental processes that involve language acquisition through listening. Something happens in the learner when it comes to these situations. From now on we will refer to psycholinguistics as PSYL.



It has been said that PSYL "explores the relationship between the human mind and language or thought and language" (Field, 2011, p.361). According to Field, it has been agreed upon demonstration that the seven major areas from PSYL research are: Language processing, Language storage and access, Comprehension theory, Language and the brain, Language in exceptional circumstances, First language acquisition and Second language acquisition (Field 2003 in Eghlidi, Talebinezhad & Fard, 2017, p. 318).

Listening input

Lexical Items

The nature of vocabulary and how to identify that a word is "known" by the user is something very difficult to explain. PSYL have obtained results based on what is known about words and how they operate when they are read or listened Field said that "We think we know what a word is because we are so used to seeing words separated by pauses on the printed page. The best way of conceiving of a word is a moveable unit of meaning which cannot be broken into smaller free-standing pieces" (Field, 2003 p.10). From the evidence: it is arguable that the lexical items cannot be broken into just "separated words". Some of them together and in different contexts give and express different concepts. There are three PSYL lexical items: lexical entries (information needed). Lexical storage (lexical items and the process of being kept). Lexical access (the process that helps the user apply the lexical items).

The implication comes to language

The implication when it comes to Language use has a very important role in the two language stages which are competence and performance that talk about known information and the usage of it. According to Higginbotham (1972, p. 814) an area of PSYL research which has great implications for education is that which has to do with discovering and defining those variables which intercede between what individuals know of their language (competence) and what they actually do in using the language (performance). There is an enormous difference between knowledge and performance, the meaning and the impact will reflect when it comes to language use. People sometimes know a lot of English, but when it comes to talking or writing they do not know how to perform. It has to do with the personality and confidence felt.



Two possible processes

It has been proven that input is essential and necessary when we acquire a language, the two possible processes obtained when a language is acquired are reading and listening. In this article, we focus on hearing, analyzing, and understanding how information is passively unnoticed. There are some levels of discourse processing when phonemes that have become in words, ideas, thoughts, and expressions come to get a meaning and a whole representation. Richards (1983) says that "three related levels of discourse processing appear to be involved in hearing: propositional identification, interpretation of illocutionary force, and activation of real-world knowledge" (p. 220). The first discourse process (propositional identification) happens when we listen to language; the second discourse process (interpretation of illocutionary force) occurs once we listened and identified language; the next step is to find a meaning to those words. When those language items are put in a comprehensive context and connected speech the third discourse process (activation of real-world knowledge) is reached.

Learn to listen or listen to learn?

A big uncertainty that has caught researchers' attention, language instructors and psychopedagogists' attention about cognitive processes in comprehension is if learners listen to learn or learn to listen. It's not simple to narrow down, it is akin to asking: what was first? The egg or the chicken? Because there must be code, a lot of mimics at the beginning when the user does not understand the vocabulary that they're being exposed to, it becomes a useless activity. Students should have an intermediate or previous knowledge to operate that skill through cognates or words, and mimics that are easy to understand and comprehend to activate those skills and help them develop the mental processes that occur. Vandergrift (2004) states that "listening instruction is expanding from a focus on the product of listening (listening to learn) to include a focus on the process (learning to listen)" (p. 3). The reality is that it is needed to be applied a scaffolding procedure in which the learner acquires code through listening. By hearing, the learner gains more knowledge. This author also says that "listeners with more language knowledge (and more automated processes) have more room in working memory to retain all information and make necessary revisions or inferences as they listen", (p. 3), which explains that learning is also crucial. Both come along; after receiving capture, students acquire knowledge through learning and the information is transformed into more significative listening capture understanding. There should be a good balance between coded information and output, since students need to process and store information to use it and have a different product out of that activity.



Research says that there is a vital importance in receiving information, there are mental processes supported by PSYL that imply the input acquired by listening. Kharchenko (2017) says that "the activity PSYL paradigm in study of listening is based on the conceptual provisions of psychological linguistics, which is considered to be the original source of the development of modern PSYL as a scientific knowledge" (p. 37). When language is articulated in sounds which produce and express a thought, it receives a listener who obtains those ideas that are transformed into new comprehension.

Listening input within psychological implications

It is not simple to fully understand what an utterance is transmitting when a learner listens to it and transforms it into actual world knowledge. According to Hulstijn (2006), diving into different stages is an essential part in order to understand the meaning of utterances. The key is to understand what is being said word-by-word. Once one or more words are defined, higher order methods will begin to work. The author says that "these processes involve sentence phrasing, reorganization of the linear order of the incoming information into a nonlinear arrangement of grammatical and semantic information units, and finally the activation of nonverbal thoughts" (p. 9). It is shown that there are scaffolding processes when listening and understanding what is being expressed through the thoughts within an utterance.

The lexical knowledge previously acquired helps future knowledge to obtain new language when it gets to be heard, but it must be adequate to the level of the listener that is getting listening input. Age is also another aspect that is being taken into consideration. It has been proved that it is not the same to acquire the first language than to obtain the second language, especially about an interference from the L1. Field (2005) mentions that some studies related to L1 listening such as the ones by Elman and McClelland (1988) and Ganong (1980) "have demonstrated that lexical knowledge plays an important part in how a listener processes a group of phonemes, especially where the signal is imprecise" (Field,2005, p.402). Listeners obtain a group of phonemes that gotten together become words, being words used in an utterance acquire meaning. It plays an important role. There have been some cases where the listeners do not have a very wide knowledge, when the lexical knowledge is not enough, and the quantity of stored information that is being received is too much, the quality gets completely ruined.



L1 or L2 acquisition

Unlike L1 acquisition when L2 is obtained from experimenting different results, teaching in a classroom over an already acquired world knowledge makes the progress change. When the user has successfully acquired a language, it becomes very difficult in the sense that there may be interference from the L1 when listening to false cognates and from words that are completely not understood. According to Field (2005) the listening task level in the L2 is closely related to phonological, discourse, and lexical complexity and with referential cohesion. Listeners are less anxious; depending on the level of L2 listening; listeners will perform better and have a higher working memory than L2 listening. Anxiety and memory play an important role when the learner is facing the L2 that is being studied. It also depends on the characteristics they have and their current emotional state. Students may have trust issues on themselves and be sure on what it has been just heard, but if the students feel unsure, there will not be a clear answer from the students.

Many experiments on the psychological approach have been tried on students by using feed in listening as their main tool for getting better results. According to Corcoran (1981), psycholinguistics "suggests a method for identifying which unit has high psychological coherence. Assuming the validity of the Gestalt principle that perceptual units tend to preserve their integrity by resisting interruption from extraneous signals, psycholinguists have exploited this tendency by introducing an interfering stimulus into a speech sequence and requiring listeners to locate it relative to the total perceptual object". (p.119). Using sounds as a tool in the class to remain words or identify them to practice grammar structures and vocabulary is very helpful in the sense that there will be new achieved goals when automatic response come into action, every time the student listens to the subject (as in the example from the experiment) the click will be listened automatically as well.

Listening skills

Listening skills go beyond simple comprehension, it is the full understanding of sounds, words, abstract ideas, meanings, broad connections, etc. It has been proved that the scaffolding processes that listeners go through, every time phonemes are received are steps that are commonly followed every time a word is received. According to Abdullaeva and Khudoyqulova (2021), through the training of listening skills and abilities, it is expected to have a good level of proficiency in different areas such as "the recognition of the sound flow, the perception of the meaning of the audited units and the identification of significant information in the audited text (p. 13). These authors also concluded that "in the course of



listening, the listener performs a perceptual-mnemonic activity and mental operations of analysis, synthesis, deduction, induction, comparison, opposition, concretization, etc. memory and comprehension" (p. 13). The different mental processes that occur when a listener is acquiring phonemes that become words which have word meanings help the human being to communicate tend to be truly unnoticed, they are completely externally controlled.

Bottom-up or top-down strategy

There are two strategies which are crucial when teaching listening: activating prior knowledge so that the student can create new information and guessing of new content that has not ever been heard previously by the listener, sometimes based on independent word knowledge. These strategies involve mental processes related to auditory perception. These are the top-down and the bottom-up strategies. In the top-down strategy, the receiver uses background knowledge of the topic to make sense of what is being listened to. Oh, and Lee (2014) found that "more proficient listeners relied more on top-down processing because they used world knowledge and text knowledge as a frame of reference for better comprehension, whereas less proficient ones used mostly bottom-up processing of what they heard" (p. 154). This refers to the fact of coming back to memory and remembering the information that has been previously stored to relate a story or information. Some examples are listening for the main idea, making predictions, drawing inferences, summarizing, and taking down notes. The second strategy is called bottom-up in which the listener attempts to make sense of the language sound or word by word, with less use of background knowledge. According to Khuziakhmetov and Porchesku (2016), "When forming bottom-up strategies of speech perception, it is necessary to have the information about essential features of English words and sentences which are essential for their successful recognition" (p. 1993). The importance of teaching listening lessons is high. The more information a student can receive means the more output the student will be able to produce in terms of replication, repetition, substitution, etc.

Meaning words

Words are more than just written or spoken ideas; there are some linguistic features that are encountered when referring to words and their characteristics. Some of them are "accented vowel, initial sound, part of speech, length in morphemes and length in phonemes, accented structure, and consonant index" (Khuziakhmetov & Porchesku, 2016, p. 1993), which are processes in the mind from sound to word and meaning. According to Ashcraft and Phillips (n.d.), the listener relies on the language message (sounds, words, and grammar) that creates



the meaning. They give these examples: listening for specific details, recognizing word-order patterns, recognizing word sounds, recognizing cognates.

Neurolinguistics and PSYL have demonstrated that listening input has different areas where they are found and proved to be part of one another. When it comes to language acquisition and the processes that are followed, the information is received in our minds. It is not possible to internally control the knowledge from somebody's mind. Broca's area plays a part in building and planning the syntactic order. It transfers the messages in a comprehensible order. This is a neurolinguistic area that plays a crucial role in communication. When Broca's area is affected, people can understand, but not speak, whereas Wernicke's area is the one that allows people to speak, but the thoughts that are transmitted and received by them (listening input) are not understood. Wernicke's area is in charge of codification and recodification. According to Price et al. (1996), "previous functional neuroimaging studies have consistently shown activation of Wernicke's area, there has been only variable implication of Broca's area. This area is involved in both auditory word perception and repetition, but activation is dependent on task (greater during repetition than hearing) and stimulus presentation (greater when hearing words at a slow rate) (p. 919). These are the two areas that are used and activated when a listener receives words and processes the sounds in stimulus, but both areas play an important role in transmitting and receiving. They are used when communicating, they are connected when people express one another.

There are two types of words known as content words which carry the most meaning when we speak (nouns, verbs, adjectives, and adverbs) and function words which help connect the content words (prepositions, articles, pronouns, and auxiliary verbs. They have a different impact when they are listened. According to Field (2011), psycholinguists have shown that first language listeners handle function words differently than content words. He adds that "this makes intuitive sense because content words require the listener to access a lexical meaning representation whereas function words do not. A separate channel of processing for functions would enable them to be detected faster" (p.363). Even quality and quantity of meaning in every word or phrase is processed through different mechanisms.

Processes

Research says that acquired listening has many stages when it is processed in the mind from being perceived as many phonemes as possible that come along to formulate words. Rost (2011, cited in Brunfaut & Révész, 2015) describes L2 listening as "an interactive, cognitive process, which involves neurological, linguistic, semantic, and pragmatic processing" (p. 142).



In that sense, those sounds transformed into words become prior knowledge that has been stored, to combine ideas, memories, concepts, to understand a shared thought. It has been also observed that humans tend to listen, observe, analyze, and repeat what other people do; an example is when they are required to repeat and produce something. All this research synthesis has helped develop this thought. Listening in a language classroom can be done through media and resources, such as videos, audios, and real-life speech. Within these types of media there are plenty of them, for example: small talks, greetings, farewells, conversations, narratives, discussions, songs, documentary and so forth.

Stages

When a listening class is presented, there are 3 stages to follow in them, the first stage is the "pre-listening" in which learners are prepared for the next activity, prior knowledge is activated through it. The second stage is the "while listening" where 2 activities should be done; an easy task and a difficult task. The last stage is a post listening task where the students are to reflect, talk, discuss, etc. If students are exposed to an input; there should be an output as well in order for the mental processes to store information. There is a reason for everything teachers do in a language classroom, but instructors do not pay close attention to those aspects that are so important. Rapport establishment, choral and individual repetition on a grammar or vocabulary class are done for a reason. Every single lesson where students must listen, particularly, in listening lessons it is expected that students do not just perceive words. Students listen, receive, convert, interpret what they heard to be compared with language storage to acquire wider lexical knowledge.

Conclusion

Listening input is a key factor when a language is learnt. Different stages in a language class shows why it is crucial. Research says that within a warmup in a class it exists an unnoticed substage called activate schemata which occurs once a student listens to the teacher's instructions. The mental processes involved are completely unnoticed. They are there, they occur, but the only problem is that there is not something observable. Neurolinguistics and PSYL are in charge of studying these processes.



What is the benefit and how it can be applied in the language classroom?

One of the benefits is that the mental processes activate memories which work in three lexical processes. The first one is the lexical entries (information needed by the listener). The second one is lexical storage (lexical items and the process of information being kept.) The third one is lexical access (the process that helps the user apply the lexical items). Language implications show that there are two language stages: competence and performance. Competence implies knowing the language, to say that we know a word, we either read or listen trying to identify what is being interpreted, a group of letters is identified as a word, then our mind transforms it into meaning. The final step in the listening key is the connected speech in different contexts that suit that word to find a meaning on it. Following the different stages that our minds follow when language is perceived through listening not only can be interesting, but it is also very helpful for teachers to know how students store and keep new knowledge in their minds. There is a reason for everything in a language class, there is a reason why teachers do reviews, reading classes, listening classes, speaking classes, and writing classes. The perfect example here is when teachers ask students to think, remember, get prior knowledge, and write it or speak it, activating schemata is a crucial daily step in a class before it begins. Then, it comes the performing which implies to put that knowledge into practice, to produce, to speak, to get that knowledge out so that it is used when it is necessary.

It can be applied in the language classroom when a teacher activates schemata, including a warmup or a small talk activity at the beginning of the class, whatever that makes the student remember or listen. For example, let's say that the lesson to teach is "reported speech". A perfect warm up activity for the students could be a telephone game, because they are listening, remembering, speaking, waking up, etc. Listening is a key factor that will help the students learn the target language because it is passively storing new information that stays unnoticed until it is reviewed again deeply.



Approaching the expert (Emails answers from John Field and Spolsky). *These are the authors' responses about the topic*

John Field:

Dear Jorge,

Very good to hear of your interest in psycholinguistics. In my view, the kind of scientific enquiry that PL demands has regrettably not had enough impact upon thinking in L2 learning circles.

There are two important reasons. One is the failure of psycholinguists to make their thinking and finding available to wider audiences in a way that is accessibly explained and not dependent upon terminology and reference to complex constructs. The second is the rather shallow way in which much of the discussion has taken place in TESOL circles, where commentators are far too ready to turn an unsubstantiated idea into a proven fact and to use it as the basis for argument or methodology. One example is to be found in the use of long-ago lists of 'subskills' which were based on guesswork. These days, another is to be found in the way that many commentators invent questions in questionnaires; then go on to take it for granted that the questions really do tap into human behavior. They are not only quote hard 'findings' based on this imagined set of processes but then apply it to the advice given to teachers and materials designers. This is especially seen in the case of listening, which is the most difficult of the four skills to investigate. Based on invented questionnaires, we are told that 'metacognitive' processes are very important to successful listening - but the fact is that they are simply the easiest for learners to report because cognitive skills are highly automatic and tend to pass unnoticed.

I hope some of this helps.

JF

Spolsky:

Glad for your interest. Psycholinguistics included study of language learning, and so had implications for TESOL. It raised the notion of a language learning module and attacked the notion that learning was only externally controlled.



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ⁱ Licenciado en docencia con más de 5 años de experiencia en enseñanza de la lengua inglesa. Como profesor y educador de múltiples escuelas en las cuales ha sido destacado por su carisma, profesionalismo y empatía. Jorge Alberto ha ayudado a innumerables alumnos a desenvolverse en la enseñanza del idioma inglés con sus objetivos a largo plazo. Tiene una licenciatura en la docencia del inglés como lengua extranjera de la Universidad de Guadalajara y es Profesor del colegio Reforma y Proulex de la UDG en el Estado de Jalisco, México. Correo electrónico: jorge.guzman2197@alumnos.udg.mx