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IMPLICATIONS OF IMPLICIT AND EXPLICIT INSTRUCTION FOR SECOND LANGUAGE ACQUISITION

PORTO ALEGRE

2017/2

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Trabalho de Conclusão de Curso apresentado como requisito parcial para a obtenção do Grau de Licenciatura em Letras – Língua Moderna - Inglês pelo instituto de Letras da Universidade Federal do Rio Grande do Sul - UFRGS.

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"we all move forward when
we recognize how resilient
and striking the women
around us are"

Rupi Kaur

RESUMO

O presente trabalho analisa publicações recentes (depois de 2005) sobre aquisição de segunda língua e compara as diferenças de eficácia entre instrução implícita e explícita em diferentes áreas da competência linguística. Qual a função da memória na aquisição de uma segunda língua é uma pergunta que não foi completamente resolvida ainda. Dois tipos de memória de longo prazo, a memória consciente (declarativa) e inconsciente (procedural), desempenham um papel na aquisição e desempenho da linguagem (COWAN, 2008; DYKE, 2012). Cada tipo de sistema de memória produz diferentes tipos de informação: memória declarativa processa conhecimento explícito (conhecimento que é aprendido e acessado conscientemente) enquanto memória procedural processa conhecimento implícito (conhecimento que é aprendido inconscientemente e não é racionalizado) (ELLIS, 2009). Neste sentido, a instrução e o aprendizado de uma língua estrangeira também pode ser categorizado como implícito ou explícito. Dessa forma, o aprendizado que é obtido sem atenção e controle consciente por parte do aluno é definido como implícito, e o aprendizado obtido por meio de atenção consciente onde a intenção de aprender se faz presente no processo de internalização é definido como explícito (REBUSCHAT, 2015). Ullman (2001; 2004) e Paradis (2009) apresentam dois modelos de representação de linguagem sob a dicotomia explícita/implícita. Para a aquisição de uma segunda língua, as implicações de cada tipo de conhecimento acarretam dois tipos de conhecimento. Esta é uma questão central no âmbito de ensino de línguas já que professores de língua devem levar em consideração o tipo de conhecimento eles almejam que seus alunos aperfeiçoem de acordo com o tipo de contexto e instrução utilizado.

Palavras-chave: instrução explícita e implícita; conhecimento explícito e implícito; aquisição de segunda língua; ensino de língua estrangeira.

ABSTRACT

This work comprises an analysis of recent research (post 2005) on second language acquisition that compares the difference in effectiveness between explicit and implicit instruction on many areas of linguistic competence that are relevant for second language acquisition. What is the role of memory on second language acquisition is a question that has not yet been entirely answered. Two kinds of long-term memory, conscious memory (declarative) and unconscious memory (procedural), play a role on language performance and acquisition (COWAN, 2008; DYKE, 2012). Each kind of memory system produces different types of knowledge: declarative memory processes explicit knowledge (information that can be consciously learned and accessed) while procedural memory processes implicit knowledge (information that is unconsciously learned and cannot be reasoned) (ELLIS, 2009). Similarly, language instruction and language learning may also be categorized as implicit or explicit. The first refers to the acquisition of knowledge without awareness and conscious control, while the second is the acquisition of knowledge under conscious awareness where intention is present in the internalization process (REBUSCHAT, 2015). Ullman (2001; 2004) and Paradis (2009) offer two models of language representation under the explicit /implicit knowledge dichotomy. For second language acquisition, the implications of each kind of instruction might produce different types of knowledge. Such question is central to language teaching in the sense that language teachers should take into consideration the kind of knowledge they aim their students to develop under each condition of context and instruction.

keywords: explicit and implicit instruction; explicit and implicit knowledge; second language acquisition; language teaching.

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INTRODUCTION

It was during one of my undergraduate courses that I had the opportunity to learn the basic content about psycholinguistics and cognitive psychology. It was then, as a teacher and a language student, that I was drawn to understand more about the cognitive processes involved in language learning. More specifically, I decided to study more about the role of memory in the acquisition of a second language with the intention to aid the development of my English students through the better comprehension of my teaching.

Ever since I started teaching English as a Second Language I have experienced and practiced many different teaching approaches. Whether I was employed as a teacher in free course language schools, or undertaking scholarship practices in undergraduate programs at UFRGS (in English Without Borders or NELE) I received teaching training courses to improve my practice. Some of them considered the explicit teaching of grammar rules to be essential for language acquisition. Consequently, the teaching program and language practices were all focused on the student's attention to language structures and traditional grammar learning. On the other hand, I also had the experience of working in teaching environments that completely disregard the explicit teaching of language structures, focusing mostly on language production and enhanced language input. I observed, however, that despite the constant disbelief of some undergraduate students and colleagues about one teaching approach or another, students seemed to improve their knowledge about the L2.

On this account, I was drawn to understand more about how I, as a teacher, could improve my practices in the classroom when planning lessons and designing tasks based on empirically supported teaching methods that are adequate to my student's needs. In order to address this question, the focus of this study is to examine the implications of explicit and implicit instruction on language acquisition through a literature review of the research in the area.

Language instruction can be understood as an intervention from the language instructor that influences the learning process. Therefore, instruction is a process that is independent of the learner and it can be explicit or implicit (ELLIS, 2009). While explicit instruction is defined as the conscious learning of a content through awareness, implicit instruction refers to learning under unconscious conditions. In this sense, explicit instruction seeks to raise students' awareness about language structure, forms and rules - thus it corresponds to rule-based approaches to language teaching. On the other hand, implicit instruction can be compared to

the communicative approach, where attention to meaning is the target focus of learning rather than form. Such differences between these types of instructions might have a relevant impact on student's level of language attainment.

The present study analyses the literature on the different outcomes of implicit and explicit instruction of different language features, such as syntax, lexicon, pragmatics, phonetics, morphology and semantics. Such analysis is relevant to current second language acquisition discussions because it helps to elucidate how the use of each kind of instruction can more effectively improve students' communicative competence. Furthermore, the matter of implicit and explicit instruction/knowledge and their implications to second language learning are still inconclusive and ongoing. Investigating the explicit and implicit dichotomy is also important to improve L2 teachers' knowledge of the outcomes of different teaching approaches, as well as their familiarity with current theories of second language acquisition.

1 THEORETICAL BACKGROUND

1.1   MEMORY SYSTEMS

To understand the role of the mind and the brain in the process of second language acquisition, it is important to examine memory performance. Since it is a key factor for language performance and language acquisition, it has been a topic of study in many different areas (SQUIRE, 1992; DYKE, 2012; BOWERS; MARSOLEK, 2003). Human memory can be divided in three storages: working memory (WM), short-term memory (STM) and long-term memory (LTM):

> Long-term memory is a vast store of knowledge and a record of prior events [...] Short-term memory is related to faculties of the human mind 0that can hold a limited amount of information in a very accessible state temporarily [...] Working memory [...] refers to memory as it is used to plan and carry out behavior. (COWAN, 2008, pp. 325)

The taxonomy of long-term memory systems can be seen below:
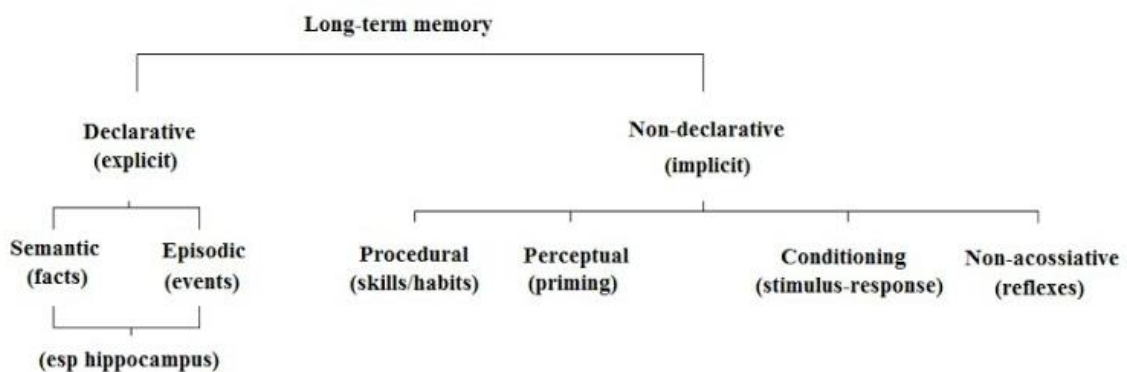
Figure 1. The schema of long-term memory systems. Adapted from Dyke (2012).

According to Cowan (2008), working memory is responsible for storing a limited amount of information for a short period of time. It is regarded as the memory responsible for problem-solving, planning, comprehension and performing behavior. It is also related to the memorization of unfamiliar information such as for example names, ideas and faces that were unknown before. This type of memory is active when someone is baking a cake and knows how

many ingredients were already added to the batter, or when someone is mentioning an address or a phone number that was mentioned seconds before. As for language comprehension, WM is important because:

> When you are listening to language, you need to retain information about the beginning of the sentence until you can make sense of it. If you hear *Jean would like to visit the third building on the left* you need to recall that the actor in the sentence is Jean. Then you need to retain the verb until you know what it is she would like to visit, and you need to retain the adjective "third" until you know, third what; and all of the pieces must be put together in the right way. Without sufficient working memory, the information would be lost before you could combine it into a coherent, complete thought. (COWAN, 2014, pp. 3)

Working memory refers not only to the kind of information that is being processed but also to a range of cognitive tasks that are responsible for learning, such as attention and comprehension. In this sense, the processes of information binding and correlations between facts assembled in WM are essential for the creation of new concepts when learning (COWAN, 2014). Short-term memory is referred to as the storage of a limited amount of information in a short period of time. Such information is kept available for recall for brief seconds in the mind. Working memory (WM) is similar to short-term memory because both relate to short-time responses. However, they differ in the proportion and kind of information each one store and process, since WM is known to manage larger bits of information. In this sense, short-term memory is embedded in working memory, since it is responsible for assembling smaller chunks of information that are processed within the WM. For Cowan (2008, 2014), WM is a subset of LTM since new information is firstly noticed by the learner through the STM, then it is rationalized in WM and it is finally stored in LTM -the most important memory systems related to learning and knowledge- through practice and rehearsal: STM → WM → LTM.

The long-term memory system is "a vast store of knowledge and a record of prior events" (COWAN, 2008, pp. 324). Differently from the other types of memory, the LTM stores a larger amount of information for a longer period of time. This system is subdivided into declarative (explicit) and procedural (implicit) memory - two structures that store different kinds of information and, consequently, present two different kinds of access to information. The main difference between the two is consciousness; while explicit/declarative memory is a conscious knowledge, implicit/nondeclarative memory refers to unconscious knowledge.

According to Dyke (2012), declarative memory:

> (…) is what is usually meant by the term memory in ordinary language, and is the kind of memory impaired in amnesia, that relating to the conscious recollection of facts and events. For this reason, it has also been termed explicit memory. It provides a representational vocabulary for modeling the external world, and the resulting models can be evaluated as either true or false with respect to the world. (DYKE, 2012, pp, 95)

Declarative (explicit) memory is the memory of facts (also named semantic memory) and events (also called episodic memory) such as faces, words, stories, scenes, concepts and meanings. This kind of memory is used in everyday life when someone remembers factual information about a specific situation, such as the scheduling of a meeting, the definition and representation of words, the place you left your car keys, or the capital of a state. As an example of how declarative/explicit memory can be observed in everyday situations, we can analyze the activity of driving. This kind of memory can be noticed when the driver is remembering rules related to spatial knowledge, as for example which roads are one-way or two-way streets or when deciding the best route to take from point A to B, and to meaning and concepts - when the driver understands driving signs or names of streets.

The nondeclarative (implicit) memory system, on the other hand:

> (…) is actually a catch all term referring to a variety of other memories, including most notably procedural memory. Nondeclarative (or implicit) memories have in common that they are expressed through action rather than recollection. As such, they are not true or false, but rather reflect qualities of the learning experience. (DYKE, 2012, pp, 95)

The procedural system is responsible for managing abilities and general skill learning such as motor, perceptual, and cognitive skills. It is a system that represents performance. Implicit memory is the memory of actions in which the person is not aware of each step of movement that is necessary to accomplish the task, like riding a bicycle, typing on a keyboard, brushing the teeth and driving. Paradis (2004, pp. 9) states that implicit memory relates to performance in the sense that it corresponds to "internalized procedures, genuine behavior programs, which eventually contribute to the automatic performance of the task". In a driving lesson, implicit memory can be noticed when the driver knows each movement to perform in order to make the car start or brake and is able to perform such actions without thinking (without conscious awareness) of them. Nondeclarative memory differentiates from the declarative

memory, among other factors, in the sense that its learning is gradual and slow, thus relying more on practice and repetition (ULLMAN, 2016, pp. 956).

The main difference between the two systems can be better understood through a close distinction between the topic of implicit and explicit knowledge.

1.2 IMPLICIT AND EXPLICIT KNOWLEDGE

As previously described, the most important memories for learning are supported by the declarative and the procedural systems, and each one of them relies on a distinct type of information: declarative memory processes explicit knowledge, while procedural memory processes implicit knowledge.

Knowledge is the product of learning. The main distinction between explicit and implicit knowledge is the presence or absence of awareness about the rules underlying the information and also if such rules can be verbalized or not (ELDER; ELLIS; ERLAM; LOEWEN; REINDERS; PHILP, 2009; HULSTIJN, 2005). Young children acquire the first language through experience and usage. They can produce language even though they are not capable of explaining the reasoning of complex language rules for doing so. Children are able to use plural or singular forms (this is my car; these are my cars) intuitively because they were exposed to input in a spontaneous environment. Such type of learning characterizes implicit knowledge - it is acquired without awareness and its rules cannot be verbalized. On the other hand, adults learn a second language through analysis and practice of language structures, making comparisons and inferences. They can verbalize their choice of using 'these' for plural nouns and 'this' for singular nouns. This is explicit knowledge since it is acquired with awareness and the reasoning can be explained and verbalized. In this sense, implicit knowledge is considered to be the "knowledge of a language" and explicit knowledge as the "knowledge about the L2" (ELLIS; HAN, 1998).

The main differences between the two are considered by Ellis *et al* (2009) as the following:

Table 1 – Characteristics of implicit and explicit knowledge.

	IMPLICIT KNOWLEDGE	**EXPLICIT KNOWLEDGE**
Memory	Procedural	Declarative
Kind of awareness	Intuitive/unconscious	Conscious
Access	Available through automatic processing	Available only through controlled processing
Evidence	It's reasoning cannot be verbalized	Can be verbalized and explained

SOURCE: based on information retrieved from Ellis *et al* (2009)

Implicit and explicit knowledge are relevant to second language acquisition because they implicate different teaching approaches. According to Ellis (2016), early second language teaching (SLT) methodologies were based only on explicit knowledge (through the practice of translation and also through the presentation and practice of specific language structures), because it was believed that the awareness of grammar rules and language patterns was essential and sufficient for the acquisition of an L2. More recently, the belief that an L2 must be acquired in the same way as an L1 led to the rise of methodologies that rely mostly on implicit knowledge (through the use of communicative approaches that focus on language skills and metalinguistic features rather than on language forms and rules only) that enhance fluency and communicative competence[1]. Not only is the change of methodologies part of the discussion of how language should be taught, but also, and more specifically, the type of instruction that is more beneficial for language learning.

The question of whether implicit and explicit knowledge constitute separated systems or not has different interpretations. The non-interface position (KRASHEN, 1981) states that both kinds of knowledge constitute two different systems. This position sustains the idea that one kind of knowledge cannot be transformed into the other. The interface position (DEKEYSER, 1998) states that explicit knowledge is transformed into implicit knowledge. The weak interface position (ELLIS, 1993) states that implicit and explicit knowledge interact and

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[1] Communicative competence are the skills and knowledge a speaker has of using a language to communicate in a successful manner. It refers not only to the knowledge about grammar, but also to the knowledge about cohesion and coherence, communication strategies, speech acts, as well as the sociocultural conditions of a language use.

that explicit knowledge can be transformed into implicit knowledge. According to Ellis (2005, pp. 215):

> The three positions support very different approaches to language teaching. The non-interface position leads to a 'zero grammar' approach, i.e. one that prioritizes meaning-centered approaches such as task-based teaching. The interface position supports PPP[2] – the idea that a grammatical structure should be first presented explicitly and then practiced until it is fully proceduralized. The weak interface position has been used to provide a basis for consciousness-raising tasks (Ellis, 1991) that require learners to derive their own explicit grammar rules from data they are provided with.

Implicit and explicit knowledge correlate to different structures of language domains. The findings by Ullmann (2001) and Paradis (2009) indicate that each language feature consists of either implicit or explicit knowledge. The Declarative/Procedural model and the neurolinguistic theory are essential for understanding how the presence or absence of awareness relate to the learning of distinct language structures, as to be seen in the next section.

1.3   THE DECLARATIVE/PROCEDURAL MODELS

Two main theoretical frameworks are important concerning the implicit/explicit memory system and their implications for language acquisition. One of them is the Declarative/Procedural (DP) model proposed by Ullman (2001a; 2001b) and the other is a neurolinguistic theory developed by Paradis (2009). Both models' will be further described in this section.

Ullman's Declarative/Procedural (DP) model (2001a; 2001b; 2004; 2015) states that the declarative/procedural memories are the most important systems for language learning, knowledge and use (EICHENBAUM, 2012; SQUIRE; WIXTED, 2011) because of the domains they underlie. The declarative/procedural systems are the "entire neurocognitive systems involved in the learning, representation, and use of relevant knowledge" (ULLMAN 2016, pp. 954). Evidence sustaining Ullman's model comes from the relationship of the lexicon to declarative memory, and of grammar to procedural memory (Kidd, 2012; CONTI-RAMSDEN, G; LUM, J; ULLMAN, M, 2014).

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[2] PPP is a deductive approach to language teaching. It stands for presentation-practice-production. When using this technique, the teacher first presents the target language form and later students practice it in controlled activities. The last phase is when students produce the targeted language in a less controlled activity.

The Declarative/Procedural model states that each memory system is responsible for the processing of different kinds of language information, in which: lexical information is processed through the declarative system, whereas aspects of grammar depend mainly on the procedural system. The declarative memory system is responsible for the linking of arbitrary information and its storage, since it "[...] appears to be specialized for associative binding; [...] and underlies not only the learning and explicit (conscious) use of facts and events but also of the sounds and meanings of morphologically simple and complex words—that is, the mental lexicon." (ULLMAN, 2001, pp 47). It is also important to highlight the definition of lexicon made by Ullman, in which the lexicon is the linking of meaning and form in language processing. In other words, the declarative memory system is related to the binding of information that relates word form to word meaning (form-meaning relations), therefore being responsible for processing lexical content. The "declarative memory is an associative memory that stores not only facts and events but also lexical knowledge, including the sounds and meanings of words." (ULLMAN, 2001b, pp.718). In this sense, language content subverted by the declarative memory system are the following (ULLMAN, 2004, pp. 245):

    ☐   representations of simple (non-derivable) words such as cat;
    ☐   bound morphemes such as the past-tense suffixed -ed;
    ☐   "irregular" morphological forms;
    ☐   verb complements;
    ☐   idioms.
    ☐   stored complex forms and abstract structures that are "regular" in that they can also be composed or derived by the grammatical/procedural system.

In contrast to the declarative system, the procedural memory system is responsible for underlying the processing of mental grammar. This system operates the implicit data of a language, such as rules and series, considering that it is "especially important in grammatical-structure building — that is, in the sequential and hierarchical combination of stored forms [...] and abstract representations into complex structures." (ULLMAN, 2001b, pp. 718). Moreover, the procedural system subserves a broader scope of language domains (it includes syntax, morphology and phonology) due to the vast processing and massive sequencing within language production and comprehension. Accordingly, content processed in the procedural/grammar scope are the following (ULLMAN, 2004, pp. 246):

    ☐   syntax;
    ☐   inflectional and derivational morphology;
    ☐   aspects of phonology (the combination of sounds);

☐   non-lexical (compositional) semantics (the interpretive, i.e. semantic, aspects of the composition of words into complex structures).

Another model, the Paradis' neurolinguistic theory (2009, 2004), offers a neurolinguistic theory of the implicit-explicit memory and their implications on language acquisition. Paradis understands that language is processed into four neural domains: the motivational system, the metalinguistic system, the implicit linguistic competence system, and the pragmatic system. For language acquisition the most important domains are the implicit linguistic competence and the metalinguistic system.

According to Paradis (2009), implicit linguistic competence refers to the knowledge that can be asserted in the individuals' verbal performance. Such knowledge is produced without awareness, acquired incidentally, stored implicitly and is used automatically. It is processed through the procedural memory system and it accounts for the processing of the computation of complex words, sentences and phrases. It is responsible for the learning of language domains such as syntax, phonology, morphology and semantics. Linguistic competence is a procedure developed by the individual from early on in life. On the other hand, the metalinguistic system processes explicit information about a language, such as vocabulary and metalinguistic knowledge. It is a type of knowledge individuals are aware of, and is consciously learned. This system relies more on attention for recall and memorization, differently from implicit linguistic competence.

Both models consider a fine distinction between some language functions and their respective processes concerning the declarative and procedural memory systems; however, some observations on their differences need to be addressed. It is clear that both systems agree on the role of declarative memory and their connection to explicit knowledge as well as the relation of procedural memory and its implications on implicit content. However, for Paradis, not all that is unconscious is procedural, since "only the computational procedures that yield the generation (automatic comprehension and production) of grammatical structures (phonological, morphological and syntactic) are" (PARADIS, 2009, pp 12). Additionally, access to information (disregarding the matter of consciousness) is implicit. Another difference between the two models is the understanding of the internalization of words by the memory systems and their definition. Ullman (2004) understands lexicon as the form-meaning pairing in language representation, whereas Paradis (2009) sees vocabulary as the sound-meaning paring. Furthermore, Paradis refers to the lexicon as the "implicit grammatical properties of lexical items" (PARADIS, 2009, pp. 12). In this sense, Paradis calls vocabulary what Ullman

calls lexicon, with unconscious aspects (e.g. bound morpheme, word argument) related to word processing as part of the implicit control. Another pertinent distinction between the two theories is the assumption of proceduralization of content in L1 and L2. Ullman understands that there is no difference in the internalization processes of the L1 and the L2 - sustaining the idea that implicit practices may lead to an L2 performance similar to the L1. This statement is not supported by Paradis, who states that L2 is not processed the same way as the L1 by late learners, who depend more on the explicit knowledge and the declarative memory.

The two models complement each other and present a similar definition on the declarative/procedural memory, implicit/explicit knowledge and language domains they subserve.

1.4 IMPLICATIONS OF THE EXPLICIT/IMPLICIT MODELS FOR LANGUAGE TEACHING

The explicit/implicit models have a direct influence in second language acquisition, teaching and instruction. Explicit information is acquired through explicit learning while implicit information is acquired through implicit learning. Explicit language learning can be understood as an intentional process involved in the acquisition of information. It "is a more conscious operation where the individual makes and tests hypotheses in a search for structure." (REBUSCHAT, 2015, pp. 3). The student is able to verbalize a logical explanation for the structure that is being produced or comprehended:

> [...] explicit learning typically involves memorizing a series of successive facts and thus makes heavy demands on working memory. As a result, it takes place consciously and results in knowledge that is symbolic in nature (i.e. it is represented in explicit form). (ELLIS, 2005, pp, 3)

Implicit language learning is the process of acquiring information without being aware of it. It occurs when the learner does not have the intention to retain a specific information because attention is not present in this process. In implicit learning "learners remain unaware of the learning that has taken place, although it is evident in the behavioral responses they make. Thus, learners cannot verbalize what they have learned." (ELLIS, 2009, pp. 3). This kind of learning is commonly observed when the L2 is acquired through immersion. In this case, a second language is processed and produced unconsciously since the student was not necessarily exposed to any corrective feedback on language forms, as it usually occurs in traditional

language teaching environments, but was rather exposed to language input in a contextualized background.

> Implicit learning is acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operations. (REBUSCHAT, 2015, pp. 3)

Another relevant definition is that of explicit and implicit instruction. Instruction is related to teachers' interventions in the learning process; that is, it involves an external process, independent from the learner. Ellis (2009) makes a distinction between instructions as a direct or indirect intervention, where direct intervention can be noticed in the form of a structural syllabus, in which the content students should know is well defined and specified. On the other hand, indirect intervention is the "conditions where learners can learn experientially through learning how to communicate in the L2" (ELLIS, 2009, pp. 16), it is usually asserted by a task-based syllabus and aims for the learning of communicative abilities in L2 rather than specific language structures. In this sense, indirect intervention is implicit instruction, since the objective of the instruction is to provide knowledge on certain structures without explanation or clear definition of certain rules:

> [...] it seeks to provide learners with experience of specific exemplars of a rule or pattern while they are not attempting to learn it (e.g. they are focused instead on meaning). As a result, they internalize the underlying rule/pattern without their attention being explicitly focused on it. (ELLIS, 2009, pp 17)

Therefore, indirect intervention can result in the learning of explicit and implicit information. For instance, when a teacher designs a set of task-based activities that are focused on a given language structure, it is possible that the structure may be implicitly internalized - when acquired through a spontaneous process - or explicitly internalized - when a given task aims to elicit reasoning of the use of the language structure from the student alone. In this sense, this indirect intervention relies on two different outcomes that are specifically related to the choice of a task in teaching, given that it can include implicit or explicit instruction depending on each kind of task that is proposed.

Explicit instruction includes only direct intervention since the focus is targeted at specific language forms and rules that are being taught and explained. It is "any attempt by either learners or teachers to manipulate learning from the outside." (VANPATTEN, 2011).

That is, direct intervention is the intention from the teacher to focus the student's attention on the patterns and rules of a certain language aspect. This kind of instruction is beneficial in situations that demand reinforced attention and noticing from the learner to specific language forms, especially when the L2 content differs from L1. However, methodologies based on explicit learning alone are not sufficient for fluency attainment since it is extremely focused on grammatical rules and decontextualized memorization of the L2.

Concerning implicit and explicit learning and instruction, a relevant issue in question is how instruction should take place in classrooms. There are many options with the first being the approaches that focus on the task-based syllabus, where communicative objectives are considered, in which implicit learning is significant. A second kind of approach is focused on form and explicit instruction and learning, as many traditional approaches to second language teaching are based on, such as the grammar-based syllabus structure, where explicit content and learning is the main focus. A third option is an approach that combines implicit and explicit instruction and learning, mixing grammar-based exercises focused on repetitions and commutative tasks focused on the study of other linguistic features. The fact that explicit and implicit knowledge are two distinct products leads to considerations of how these can be better assessed and worked in language teaching through instruction. One important issue related to L2 teaching is how input can be designed and presented to the student in order to improve language performance, and what language features can be processed through each kind learning.

For example, for VanPatten (2011) syntax resists explicit learning and teaching. He defines syntax as "those properties of language related to and derived from formal and abstract features of a grammar, specifically those that are governed and constrained by Universal Grammar (UG)." (pp. 9). His definition of syntax is different from the common understanding of syntax that can be found in ESL textbooks, that usually simplify the notion of syntax learning as the understanding that "object pronouns must precede finite verbs in Spanish", or that "In German, the verb is always in second position" (VANPATTEN, 2011, pp. 10). For him, syntax "involves those properties of language related to and derived from formal and abstract features of grammar, especially those who are governed and constrained by Universal Grammar (UG)", e.g.:

1. Universal principles that govern well formedness in all languages (e.g., the Overt Pronoun Constraint, The Extended Projection Principle);
2. Parametric variation across languages— a. Features (e.g., interpretable and uninterpretable) and their loci of checking (e.g., VP, DP,

CP). b. Overt and covert movement arising from feature checking (e.g., Wh-movement, verb movement). c. Phrase structure (such as the elements required under X-bar Theory, i.e., Specifiers, Heads, their complements) or the hierarchical projection of functional categories (so that feature checking can occur)

The acquisition of syntax is independent from explicit instruction and occurs through stages of development (ELLIS, 1989, TOWELL; HAWKINS, 1994); that is, the learning of complex syntactic structures depend on the learning of smaller structures that are related to it, which are not immediate and are independent and not correlated to explicit teaching and learning.

Evidence to the way syntax is learned comes from research that showed that L2 learners of German only learn inversion structure when they first learn word order (PIENEMANN, 1984). Additional evidence was found by Verhagen (2011), who investigated verb placement in SLA. Participants received content-driven exercises and almost no explicit instruction on grammar was given. Results showed that L2 learners of Dutch were unable to produce lexical verbs unless they had previous knowledge of auxiliaries. Furthermore, the learning of negation in English depends on the learning of other syntactic aspects (SCHWARTZ, 1998; LIGHTBOWN; SPADA, 2006; VANPATTEN; WILLIAMS, 2007). According to VANPATTEN (2011, pp.11), the learning of negation in English depends on the following stages:

Stage 1: Negation external with *no*.
No drink beer. No want dinner.
Stage 2: Negation moved internally.
I no drink beer. He no want dinner.
Stage 3: Appearance of unanalyzed *don't* that alternates with and/or replaces *no*.
I don't drink beer. He don't drink beer.
Stage 4: Appearance of negation with modals and auxiliary *have*.
I can't drink beer. He won't eat dinner.
Stage 5: Appearance of analyzed do with negation (native-like stage)
I don't drink beer. He doesn't want dinner.

Overall, VanPatten (2011) states that the learning of syntax is implicit because it occurs without conscious control, without awareness. In this sense, "syntax happens to learners" (pp. 13), therefore "instruction does not result in learners skipping stages of development in the acquisition of syntax." (pp. 14).

Other studies examined the relationship between the kinds of instructions and the aspects of language being learned. In a meta-analysis, Norris and Ortega (2000) analyzed and compared the outcomes of implicit versus explicit instruction that focused on form (grammar) learning in formal foreign language teaching contexts. The objective of the research was to investigate whether instruction should be focused on form through traditional grammar explanation or should be focused on meaning and context in ways to improve acquisition. Instruction was considered explicit when a rule or an explanation was part of the direction being given, and implicit when students were demanded to formulate a rule themselves since no explanation was given in the directions. Seventy-seven samples were analyzed and 49 indicated that form-focused L2 instruction resulted in an increase of language knowledge, and that explicit instruction is more effective than implicit instruction. Three main types of instruction were selected in terms of the objective of the directions: whether it requested learners to focus only on form (focus-on-form instruction – explicit learning), focus only on meaning (by providing a rich input and use of L2 - incidental/implicit learning), or an integration of meaning and form instruction through interventions to focus on form in meaningful communicative context (focus-on-form in context instruction). The following pattern of treatment effectiveness was observed in the findings: focus-on-form/explicit > focus-on-form in context instruction > incidental/implicit learning. Such pattern indicated that instruction that focuses on form in or out of context is more effective than instruction that lacks focus (implicit).

Another meta-analysis on the effects of L2 grammar teaching through explicit or implicit instruction examined 41 studies, of which 17 were based on simple grammar structures (e.g. regular past tense) while 24 concerned complex structures (e.g. Wh-question of an object of preposition) (SPADA; TOMITA, 2010). The kind of knowledge observed as a result of the types of instruction was monitored through the distinction between spontaneously acquired knowledge (implicit) versus controlled responses (explicit). Results indicated that implicit instruction is relevant for the teaching of complex structures alone, while explicit instruction is significant for both simple and complex grammar structures. Other research examined the implicit learning of an artificial language syntax (word order and case marking) by 36 participants, investigating subject's learning immediately after input and also two weeks after the experiment, during which participants received no additional exposure to the language (GREY; REBUSCHAT; WILLIAMS, 2014). Results showed that implicit knowledge was attained in both testings, with additional evidence of improvement of language performance. The study did not measure explicit knowledge.

A study by Schmitt and Sonbul (2013) examined the relationship between implicit and explicit knowledge regarding the processing of lexical content. The study tested 35 students, including native and nonnative English speakers, for medical collocations -a kind of implicit information). Results showed advantages of explicit input for explicit knowledge and no advances on implicit knowledge either under explicit or implicit input conditions. Although results showed an advantage for explicit instruction, it is important to highlight the absence of implicit testing in the research. Another study on lexical content (DĄBROWSKA, 2014) showed that lexical knowledge constitutes both implicit and explicit knowledge. A list of 140 words (Vocabulary Size Test) was given to 75 native English speakers in order to investigate the kind of knowledge they had of word definition. Students received no prior instruction and results confirmed explicit knowledge in correct answers followed by accurate explanation for the word-definition choice, and evidence of implicit knowledge for accurate answers of words that participants demonstrated not to be familiar with. Schmitt and Sonbul (2013), in a study where 43 postgraduate students, nonnative of English, were tested about their learning of medical collocations in English, showed an advantage of explicit instruction for the acquisition of vocabulary. The study examined three types of instruction: one implicit condition (enriched) where collocations are presented immersed in a reading passage, and the other two explicit with one condition (enhanced) being the collocations immersed in the text but highlighted in red and in the last condition (decontextualized) the collocations are presented in a PowerPoint presentation. Testings of implicit (priming) and explicit (recall and recognition) knowledge demonstrated an advantage of the enhanced condition over the two other kinds.

When taking these pieces of evidence into consideration, the question of what approach and methodology might be best for improving students' performance arises. Grey, Rebuschat and Williams (2014) showed evidence that implicit learning is beneficial for syntax learning. Although the study did not compare explicit and implicit instruction, other studies did and presented more complex results. Spada and Tomita (2010) analyzed forty-one studies published between 1980 and 1998 that investigated the relationship of explicit and implicit instruction in grammar teaching for English as second language students. Each publication was separated according to the kind of grammar language feature that was targeted: either complex or simple form. The meta-analysis presented evidence that implicit instruction is relevant for the teaching of complex grammar structures alone while explicit instruction is beneficial for learning simple and complex grammar structures.

Norris and Ortega (2000) also found explicit instruction to be more effective than implicit instruction for grammar learning. Dabrowska (2014) presented evidence that lexical

knowledge relies on both implicit and explicit knowledge, and Schmitt and Sonbul (2013) showed an advantage of explicit instruction for the teaching of such content.

The presented evidence indicates that explicit instruction is especially beneficial for the learning of lexical and simple grammar content, while implicit instruction seems to be responsible for the development of more complex structures about the L2. Overall, studies demonstrated that both kinds of instruction are needed in second language learning and that each kind of instruction is more beneficial for a different kind of content.

Based on these questions, the objective of this paper is to investigate the role of implicit and explicit instruction in the learning of each language aspect (syntax, lexical, pragmatic, phonetics, morphology and semantics). Therefore, previous research investigating explicit and implicit language instruction and knowledge were selected for a literature review and analysis. Research regarding the relationship between types of instruction and language aspects were analyzed.

2 ANALYSES

A number of articles, book chapters and books in the SLA field were selected for analysis. Articles that were published after 2005 and regarded implicit or explicit knowledge and instruction were examined and their findings are categorized into the kind of language feature they contemplate: syntax, lexicon, pragmatic, phonetics, morphology, and semantics.

2.1 SYNTAX

A number of studies have presented evidence that syntax is acquired through implicit instruction. Amato and MacDonald (2010), for example, provided evidence that implicit learning, when compared to explicit, is responsible for a faster learning of complex syntactic structures. The research investigated sentence comprehension of an artificial language. Participants received no explicit instructions about vocabulary or structure of the language, being exposed only to language input through a set of images with subtitles describing each corresponding scene. Feedback on vocabulary meaning was granted (learners did not receive feedback on grammar or any other structure) during the training phase. Results showed that

participants were able to learn verb + subject + object (VSO) links, and no explicit knowledge was observed.

On the other hand, Fernández (2008) presents evidence that the use of implicit or explicit instruction does not interfere in the acquisition of syntax in the L2. The objective of the study was to investigate the acquisition of word order object + verb + subject (OVS) in Spanish. College students (L2 learners of Spanish) were divided into two groups - one received explicit feedback and the other implicit feedback - and worked individually in a computer. Both groups received the same amount of language input (sentences showed in the computer screen for the same period of time) but students who were explicitly instructed (n = 42) received explicit information about the sentences while the implicitly instructed group did not (n = 42). Evidence showed no difference in the extent of learning between the two groups. The research did not test long-term knowledge because its focus was to examine input processing only.

Other studies investigated the teaching of syntax through implicit instruction. They suggested that, although syntax may be acquired through implicit conditions, its knowledge is explicit. For instance, Bell (2017) investigated whether syntax learning by adults occurred explicitly or implicitly under incidental input only. Participants (N = 81) were exposed to incidental input of a semi-artificial language (English lexicon, German syntax) through 102 examples of the language in form of short stories and crosswords. Sixty-three participants showed implicit and explicit knowledge while eighteen showed only implicit knowledge, implicating that both explicit and implicit knowledge are engaged, but that implicit knowledge is more relevant in syntax learning.

Sustaining the idea that explicit instruction aids the learning of syntax, Moinzadeh, Nezakat-Alhossaini and Youhanaee (2014) tested two groups of learners of English about the learning of passive objective relative clauses. Only one of the groups received explicit instruction by being presented to the target language form and practicing it in form-focused exercises handouts, while the other group continued with the regular writing class. The research showed evidence that explicit instruction does improve implicit knowledge since explicitly instructed students showed improvement of their implicit and explicit knowledge.

Finally, Balcom and Bouffard (2015) investigated the learning of syntax when the structures in the L1 and the L2 differ. The study tested the acquisition of adverb placement in French by learners of French as a third language. The two groups of participants attended classes with the same instructor who used the same material and class syllabus. Learners did not have previous knowledge of the targeted structure (positive and negative adverbs). One group received explicit (form-focused) instruction about the position of adverbs and the other

did not. Results show that form-focused is beneficial for adverb placement as the explicitly instructed group showed advances in the use of positive adverbs in French, implicating the need for awareness when L2 syntactic structure differs from L1.

In conclusion, evidence suggests that syntax learning in L2 is closely related do implicit knowledge. Even though some of the studies presented evidence of explicit knowledge being more beneficial for the teaching of different structures between the L1 and the L2, the general finding is that syntax rely mostly on implicit knowledge.

2.2   LEXICON

Regarding the learning of lexical content, evidence suggests that vocabulary learning tends to rely mostly on explicit instruction. Choi, Kim and Ryu (2014) have presented evidence that the use of explicit learning can be more beneficial for long-term results. The study investigated the outcomes of implicit and explicit instruction on the acquisition of 30 vocabulary items under implicit condition, through the reading of a short-story, and another 30 vocabulary items under explicit conditions, a simple list of words, by high school Korean students (N=15) of English as a second language. Results showed no difference between the explicit or implicit learning of vocabulary for short-term results, but showed evidence that the use of wordlists as explicit learning is more effective for long-term knowledge than implicit vocabulary learning. That is, "learning words devoid of context may be more effective in helping learners create explicit links between L2 form and L1 meaning, whereas neither type of learning seems superior for facilitating processing fluency of target words" (pp. 230).

On the other hand, Dąbrowska (2014) has provided evidence that lexical knowledge is not only explicit, but also implicit knowledge. The study investigated the nature of lexicon content in native English speakers through a vocabulary test containing 140 words where sixty undergraduate students had to reason their knowledge about the vocabulary. The selected words were low-frequency English words, and results showed that even when guessing the answers participants had a high score, indicating that they had implicit knowledge about vocabulary.

Another study presented a different perspective. It investigated vocabulary acquisition by native English speakers and found that the kind of instruction directly affects the kind of knowledge that is produced (HAMRICK; REBUSCHAT, 2012). Thirty participants were exposed to explicit or implicit instruction about 27 vocabulary items of an artificial language. Participants were taught pairings of sounds to images of drawings of each word. Findings suggested that implicitly instructed participants primely developed implicit knowledge, while

explicitly instructed participants primely developed explicit knowledge. Besides demonstrating the strong influence of the kind of instruction being used in teaching, the study showed evidence that vocabulary knowledge is both explicit and implicit.

Rutherford and Taboada (2011) investigated vocabulary learning by children. Twenty students enrolled in the fourth grade of an elementary school in the USA were tested. The students were attending English as a foreign language since they were immigrants who had recently moved to the country. The study investigated the acquisition of 35 words about science in context (implicit) versus instructed (explicit). Both kinds of instruction seemed to improve students' vocabulary knowledge, but explicit instruction showed an advance of explicit knowledge for all children despite their level of proficiency, while implicit learning showed more significative results in high-proficiency learners. The study also indicates that explicit instruction was able to improve students' knowledge even in long-term testing, while implicit learning improved students' comprehension abilities. The conclusion is that both kinds of instruction are beneficial for young learners, but the benefits of each kind of input is correlated to (1) the proficiency level and (2) the kind of effect that is aimed for, for explicit instruction seems to aid long-term knowledge while implicit instruction enhances language comprehension.

Furthermore, the use of combined explicit and implicit instruction for vocabulary learning was tested in a study that investigated whether knowledge about discourse markers is enhanced through implicit and explicit learning (KARAATA; ÇEPIK; ÇETIN, 2012). The study investigated the appropriate use of cohesion elements in writing by 11 students of English as a foreign language enrolled in an Advanced Writing course in a university program. Students were asked to write an essay and their productions were evaluated in the use of discourse markers. Students received either implicit instruction through extensive reading or explicit instruction through extensive explanation and feedback on use and form. Results showed a significant improvement of students' use of discourse markers. The study did not objectively measure implicit versus explicit learning outcomes, but recorded students' outcomes on both learning types qualitatively and most of the learners' responses stated that the combination of explicit and implicit tasks was fundamental for their improvement.

The question of whether context influences vocabulary learning has been addressed by Batterink and Neville (2011) in a study where they investigated the explicit and implicit knowledge about words in meaningful context and under no contextualized settings. In the study, 21 native English speakers were tested in the acquisition of pseudo-words. Participants read four fiction stories of about 4000 to 5000 words, in which pseudo-words were presented

10 times either in meaningful contexts (with meaning being presented) or meaningless contexts. Results showed that explicit context enhances vocabulary acquisition in a faster learning, and implicit context presents a slower learning, for the reason that implicit learning requires a longer exposure to input.

Concerned only with the outcomes of implicit instruction for vocabulary, Ender (2016) investigated the process of vocabulary learning and considered the factors involved in the implicit learning of it. Participants were 24 Germans that were advanced learners of French as a foreign language. Students were recorded when reading a newspaper article, summarizing the text and answering to comprehension questions. The recordings showed their verbal understanding about the language since they were asked to declare their knowledge for each unknown word. The study showed that when students found an unknown word, in 38 per cent of the cases they ignored it, in 39 per cent of the cases they searched a dictionary, in 10 per cent of the situation students decided to infer meaning, and in 13 per cent of the cases students inferred meaning and searched dictionary entries. Results showed that when students learned vocabulary in an incidental condition most of the knowledge they acquired was through inferences, as most of the time they judged the word to be essential for the comprehension of the task they relied on the dictionary to look for explicit explanations. Additionally, the findings indicated that "three factors foster the incidental acquisition of an initially unknown lexical item: (i) the conscious decision to determine the meaning, (ii) increased learner involvement in the analysis of the material, and (iii) inclusion of form and meaning features in processing." (ENDER, 2016, pp 558).

In conclusion, results indicate that both kinds of knowledge are implicated in the acquisition of lexical content. Evidence suggested that each type of instruction leads to a type of knowledge (implicit instruction – implicit knowledge; explicit instruction – explicit knowledge). Also, explicit learning of vocabulary is a faster learning and has longer duration when compared to implicit learning and it is especially beneficial for low proficiency learners. It was also found that the benefits of implicit learning of lexical content is directly related to the amount of exposure to input, because students depend on a longer exposure to the targeted item.

2.3 PRAGMATICS

Student's communicative competence relies on pragmatic knowledge that seems to be better enhanced through explicit instruction. A study presented evidence that awareness of

pragmatic features must be explicitly taught (FAHIM; GHOBADI, 2009). Participants were sixty Iranians learners of English as a second language. The study investigated the learning of thanking formulas in two tasks: a series of role-play activities, and a written discourse completion task. Explicit instruction, in which students received explanations of how to behave in each situation, and implicit instruction, in which students were exposed to input but no explanation on cultural aspects was given, were contrasted. Results showed that explicit instruction on thanking formulas was more effective than implicit instruction.

Such advantage of explicit instruction for pragmatic content is also supported by Halenko and Jones (2011), who tested the outcomes of instruction on the development of pragmatic competence by L2 learners. The study investigated the production of spoken requests by 26 Chinese learners of English. Whereas one group received explicit instruction, the control group was not instructed. In the explicitly instructed group, students were exposed to language samples and were instructed on cultural aspects related to the use of requests in English. Students' knowledge was evaluated through an open interview and a post-test, that showed an advantage for the group under explicit instruction.

Similar results were found for a study that analyzed the pragmatic competence of L2 learners in the use of speech acts for giving constructive criticism to their classmates (NGUYEN; PHAM; PHAM, 2012). Participants were sixty-nine Vietnamese learners of English who were divided into three groups: one receiving feedback on form and meanings and explanations, another was only exposed to input, whereas the last group was the control group – not receiving any kind of specific instruction. The groups receiving feedback and input showed improvement in their performance in the three tests (a role-play activity, a discourse completion task and an oral peer-feedback task) when compared to the control group, but the group that received explicit instructions outperformed the implicitly instructed group.

On the other hand, other studies demonstrated that both kinds of instructions are beneficial for the development of pragmatic competence. Ardestani and Yaghoubi (2014) investigated the implications of implicit, through input only, or explicit instruction, through explanations about form and meaning, on the use of discourse markers. Ninety Iranian students of English as a foreign language were tested in a writing task in which they were asked to either highlight the markers in the text or complete blank spaces with the appropriate discourse marker. Results showed no major difference between the types of instruction, only that both kinds of instruction improved students' knowledge.

Fukuya and Martinez-Flor (2008) also found implicit and explicit instruction advantages for developing pragmatic competence. Pragmatic development in assessment tasks – an oral

production for a phone conversation and a written production of an email response - was investigated. Participants were 49 Spanish students of English as a second language. Two groups were tested, in which the explicitly instructed group received meta-pragmatic information about content while the implicitly instructed group was only exposed to input. Explicit instruction showed major improvement of the phone task when compared to implicit instruction, but showed no difference in the email task. However, results are inconclusive due to the fact that researchers chose to investigate and compare two tasks that involve different abilities and therefore are not completely comparable. Overall, the conclusion is that both kinds of instruction are beneficial for teaching pragmatic competence.

Li (2012) found similar results concerning the learning of speech acts. The study examined the implications of three different forms of instruction employed in the teaching of different ways of uttering polite requests by 197 Chinese students of English as a foreign language. One kind of instruction tested was incidental with input and output activities, one was implicit through the visual enhancement of the input, and the last one was explicit through meta-pragmatic information. A discourse completion task presented evidence that the explicit kind of instruction alone did not improve students' knowledge, while implicit and incidental instructions resulted in the most complete learning since students showed to have learned all the ways of uttering polite requests presented in the instruction phase. However, differently form the incidental instruction, the implicit learning through visual input only did not produce learning in the long-term.

Regarding the use of explicit instruction using semi-authentic material for teaching pragmatic competence, Denny and Sachtleben (2012) reported their teaching experience in an English as a second language class. Twenty-eight migrant students in New Zealand enrolled in a trainee interpreter course were tested. The material created for the study consisted of a role-play activity based on a spontaneous native speaker communication involving the situations of clarification and repair after an insult, a complaint with resolution, and disagreement avoidance. After exposure to input, students were guided to discuss the use of the pragmatic content they had learned in a debate section. Students' development was perceived through a blog used for collection, in which students wrote a personal journal about their classes and their personal development. In the journals, the awareness of pragmatic features could be noticed. The qualitative research demonstrated that explicit learning of pragmatic features is effective and that it had improved students' pragmatic knowledge.

Another study investigated how explicit instruction can improve pragmatic competence (LAI; QI, 2017). Participants were 42 adult learners of Chinese as a second language. The study

compared explicit deduction instruction -present explicit explanation before the examples- and inductive explicit instruction -present examples first and present rules later-on pragmatic competence about the speech act of request – how to make polite questions. Results of an open-ended discourse completion task showed that inductive explicit learning is more effective than deduction explicit instructions when pragmatics is being taught.

In conclusion, the majority of the studies analyzed provided evidence of an advantage of explicit instruction for teaching pragmatic competence. When studies compared both kinds of instruction, the explicitly instructed groups showed better performance, whether for learning the use or cultural aspects related to pragmatic competence. Studies that did not find a major difference in the outcomes of explicit versus implicit instruction were able to identify advances in the learning under both conditions.

2.4 PHONETICS

Pronunciation is usually not a central topic in SLT. However, studies indicate that in at least some specific situation its teaching should be explicitly conducted. Buss (2016) studied the beliefs of Brazilian teachers about their practices of teaching pronunciation in English as a second language class. Sixty teachers of English as a foreign or second language answered an online survey about the teaching practice of pronunciation and their beliefs about them. The study found that teachers tend to rely on traditional approaches based on explicit instruction, using the practice of word-level features through repetition. The study also suggested that teachers tend to focus on phonetics awareness when students have difficulty in producing specific L2 structures that are different from L1. This fact is supported by another study which showed that students implicitly categorize L2 sounds according to their L1 representations (NAVARRA; SEBASTIAN-GALLES; SOTO-FARACO, 2005). The study measured the implicit knowledge of 48 students about phoneme discrimination in the L2. Participants were Catalan-Spanish bilinguals that were tested regarding the discrimination of vowel variations between the two languages. Results showed that students were able to differentiate vowel changes only when the L1 and L2 vowels were different phonemes in the L1. Therefore, some phonetic features that differed from the L1 to the L2 might have required explicit instruction and awareness from the learner.

Several studies found an advantage of explicit over implicit instruction. For instance, Sturm (2013) compared students' pronunciation development under explicit instruction versus implicit input only. Participants were 22 advanced learners of French as second language. One

group of study received explicit instruction on phonetics and the other group was only exposed to input. Results showed a major improvement of the explicitly instructed group. In the same way, Dlaska and Krekeler (2013) suggested that other kinds of explicit intervention might be more beneficial for the development of phonetic knowledge. The study compared the pronunciation development of 169 Germans ESL students under two conditions: under implicit learning and under implicit learning combined with explicit feedback. One of the groups received implicit input through listening to recordings with teachers' pronunciation, while the other group received the same implicit input but received explicit feedback as well. Feedback was an individual corrective feedback of their own recorded pronunciation. The effects of explicit feedback demonstrated to be more beneficial for students' pronunciation development than when students are exposed to input alone. Results showed that explicit feedback of students' output is more effective than implicit input only.

Furthermore, Kissling (2015) identified that explicit instruction on phonetic features might not have an instant effect on learners' development, but they are rather effective for a delayed perception about phonetic patterns. The study provided phonetics instruction to 87 native English speakers that are students of Spanish as a foreign language and participants were tested about their perception of phonemes in Spanish. One group received extensive explicit instruction on phonetics while the other group received regular classes but were not aware that the study was investigating their performance on phonetics. Both groups performed equally in the immediate test, but the explicitly instructed group outperformed the other in the delayed posttest.

Additional evidence shows that both kinds of instruction can improve phonetic competence of L2 learners. In another study, Kissling (2013) identified that both kinds of instructions are beneficial for phonetic knowledge since both groups under implicit and explicit instruction performed equally in testings. The study investigated the outcomes of two computer-delivered courses about phonetics by 95 students of Spanish as a foreign language. Both groups in the study were exposed to phonetic input, but one group received explicit instruction while the other did not. Results suggested that improvement of phonetic knowledge might be better enhanced due to differences in practice or input rather than instruction.

Another study suggested that word stress can be learned implicitly in second language learning (CHAN; LEUNG, 2014). Thirty-Seven Cantonese speakers of Spanish as a second language were tested on their awareness of stress regularities in Spanish. Participants ranged from intermediate to advanced knowledge about the L2 and had no previous knowledge about Spanish nor Portuguese. Students were exposed to audio input of 16 Spanish words and were

unaware that the study was investigating pronunciation. The testings investigated if participants were able to identify stress regularities based only in the input. Results showed that students were able to recognize correctly pronounced novel words under implicit learning conditions and that they performed better than students that received explicit instruction.

Therefore, the conclusion that explicit instruction aids phonological knowledge in second language learning can be assured. Phonetic awareness seems to be particularly beneficial in cases where L2 structures differs from L1, since learners tend to categorize L2 sounds according to their L1. Testing also showed that both kinds of instruction are able to improve students' knowledge.

2.5 MORPHOLOGY

Evidence demonstrates that morphology can be explicitly taught. Roehr-Brackin (2014) analyzed the outcomes of explicit instruction in the acquisition of morphological features of German verbs (*gehen* and *fahren*) by one native English speaker that was studying German as a Second Language during the course of three years of learning. The study analyzed the explicit learning by gathering data (85 audio recordings) of his development. His use of form and his metalinguistic descriptions were elicited after each class when the teacher asked him to talk about what he had learned in the previous lesson - he received explicit feedback during his explanations and use of language. The recordings served as a base for the analysis where any kind of explicit knowledge was relevant, whether the student himself corrected his production or the teacher corrected or commented about errors. The study suggested that explicit instruction is beneficial for the morphological acquisition of an L2 since results showed that the student demonstrated to rely on his explicit knowledge to produce and comprehend the targeted structures correctly.

Additionally, Baleghizadeh and Saharkhiz (2014) found an advantage for the efficiency of explicit instruction in the learning of morphological content when compared to implicit instruction. The study compared implicit instruction to explicit instruction on the acquisition of derivational affixes in English by 71 adult learners of English as a second language in a university course. Participants were tested on their knowledge of inflectional affixes in English. While one group received explicit instruction, a second group received implicit input and was asked comprehension questions about the text they read - the first group was first exposed to explicit instruction and was later given a task on input activities. Results showed an advantage

of explicit instruction for production while implicit instruction was shown to be responsible for improving students' comprehension and students' self-confidence.

On the other hand, Ellis and Shintani (2011) suggested that implicit instruction does improve morphological knowledge. They tested 36 young (from 6 to 7 years old) Japanese learners of English as a second language in the acquisition of plural forms in English. In the two groups of the study, students were instructed under implicit conditions – one being a comprehension-based instruction, where students were exposed to enhanced input, and the other being a production-based instruction in which students received implicit feedback on their production. Students' knowledge was analyzed in three different tests, a comprehension test that use pictures for students to match with the words, a "wug" test using 5 real words and 5 nonsense words, and an oral production test. Results showed that students improved their knowledge in both comprehension and production tests, therefore stating the advances in the acquisition of plural forms under implicit conditions.

Additional evidence of the positive implication of implicit instruction for the acquisition of morphological aspects was presented by Godfroid (2016). She investigated implicit instruction about morphological knowledge by thirty-eight upper-intermediate learners of German as a second language. Learners were divided into two groups. One group was exposed to audio input of a German morphological structure (vowel-changing verbs) while the other group received neither input nor explanation. Testing consisted of a word monitoring task for measuring implicit knowledge and a controlled oral production for measuring explicit knowledge. Most of the students exposed to implicit instruction reported no awareness about the morphological changes but performed well in testing, indicating that they had acquired implicit morphological knowledge. Although participants were not aware of morphological rules, they were able to identify the structures in tests but were not able to produce them.

In a particular case, when the L1 is similar to the L2, implicit instruction seems to be more beneficial than explicit conditions. Tokowicz and Tolentino (2014) provided evidence to that in a cross-language study in which 39 adults (native speakers of English) were divided into three groups and received training about 35 language features in Swedish. For the training sections sixty sentences were divided into three groups (20 sentences each) according to their level of similarity to English. Similar structures in the L1 and the L2 were singular and plural nouns, the structures that differed in the L1 and the L2 were definite and indefinite nouns, and the last group that included unique L2 structures were neutral and common gender nouns. Each group received explicit vocabulary training but different grammar training according to each level of similarity between the languages. Grammar learning occurred through a computer

program under three different kinds of instruction. Every group was firstly exposed to language input alone and was told to pay attention to grammatical patterns. The first group was exposed to pairings of sentences with non-contrastive grammatical patterns. The second group was exposed to the same sentences as the previous group, but the sentences were paired based on contrastive morphemes between the sentences, which were highlighted. Students were not explicitly instructed about the morphological structures. The last group, on the other hand, was exposed to the same sentences as the previous group and received explicit explanation about the highlighted morphemes. The results indicated that for the acquisition of unique morphosyntactic structures of the L2 explicit learning showed to be more effective, followed by implicit learning. The acquisition of dissimilar features between the L1 and the L2 was more improved through implicit instruction with enhanced input. Simple input was regarded as the last efficient kind of instruction. Overall, findings suggested that explicit instruction is more fitted for the instruction of unique language features while enhanced implicit exposure is more beneficial for the learning of similar and dissimilar morphosyntactic structures between languages.

Furthermore, another study investigated the neurocognitive processing of gender agreement (noun-article and noun-adjective) of an artificial language under implicit and explicit conditions by adults (MORGAN-SHORT; SANZ; STEINHAUER; ULLMAN, 2010). Participants learned the artificial language either under implicit (immersion-like) or explicit conditions (classroom-like). In testing, participants were exposed to sentences that were either correct or had agreement violations. Both groups showed no differences in the learning of the language but showed different ERP[3] patterns according to each level of proficiency. N400s were identified in low proficiency levels in adjective and article violations by the implicitly instructed group and only noun-adjective violation for the explicitly instructed group. For highly proficient speakers, noun-adjective violations showed N400s and noun-article violations showed P600s for both the implicitly and explicitly instructed groups. Results showed no difference between the types of instruction for language learning but indicated that the acquisition of inflectional morphology of the L2 is related to students' proficiency level. Therefore, the study concluded that low proficient L2 learners do not rely on inference from their L1 but rather rely on their lexical and semantic processes and their declarative memory.

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[3] ERP is a method used for analyzing the neurocognition of language processing and it reflects the real-time brain activity to the presentation of stimuli. Linguistics violation such as difficulties in lexical and semantic processing show N400s; disruptions of rule-governed syntactic and morphosyntactic processing show LANs; and difficulties in syntactic word-order and morphosyntactic processing show P600s. (pp. 158)

Additionally, low proficiency learners that received implicit instruction showed to rely on the lexical and semantic process in both kinds of noun agreement. Explicitly instructed low proficient speakers showed to perform in a similar way but only for the learning of noun-adjective agreement. As for the learning of noun agreement by high-proficient learners, the difference of instruction showed no distinction in the learning of noun-article agreement since both implicitly and explicitly instructed groups seemed to rely on their L1 processing mechanisms. Their learning of noun-adjective agreement, on the other hand, seemed to rely on lexical and semantic processes. In conclusion, the study demonstrated that morphosyntactic learning in the L2 is more dependent on the level of students' proficiency rather than the type of instruction they are exposed to.

Finally, a general finding is that studies found no advantages of one type of instruction over the other, but indicated the best effects of each type of instruction. Studies suggest an advantage of implicit instruction for similar morphosyntactic structures in the L1 and the L2, while an advantage of explicit conditions when the structures are not similar. In addition, morphosyntax seems to be more dependable on the factor of proficiency level instead of the kind of instruction that is being employed in teaching.

2.6 SEMANTICS

Regarding the teaching of semantic aspects, evidence sustains the idea that both kinds of instruction are beneficial for its learning. Paciorek and Williams (2015) demonstrated that implicit learning of semantic generalizations occurs even within limited exposure to input. The study provides 4 similar experiments. In experiment 1 participants were 36 students from the University of Cambridge. They were tested on semantic knowledge of verb-noun connections in English. In experiment 1, the students were specifically assessed on their knowledge about semantic preferences of the words *diminish, deplete, increase,* and *add*. Training consisted of 64 sentences, of which half contained one of the novel words (*powter, gouble, mounten, and conell*) and the other half contained none. Forty testing items were used in order to assert students' knowledge of word pairings within the sentences. Students were trained by having to choose the general meaning of the novel word in the sentence. Tests showed evidence that the majority of the students did not acquire explicit knowledge about the targeted form. Experiments 2 to 4 were similar to experiment 1, but the material suffered some changes. In experiment 2 an article was added between a novel verb and an abstract noun and, in some of the sentences, a concrete noun. In experiment 3 the same sentences used in experiment 1 and 2

were translated to Polish. Polish students (N = 56) took the test with similar conditions as the previous experiments. For experiment 4 seventy-four native English speakers from the USA were trained and tested about the sentences used in experiments 1, 2 and 3, but additional abstract nouns (such as *happiness, wisdom, impact,* and *understanding*) and concrete nouns (*chocolate, luggage, metal* and *paper*) were added to them. The test also included a confidence rate questionnaire about student's nature of knowledge. Results indicated that participants were able to implicitly learn generalized patterns but that they were not able to build explicit knowledge about them.

Broszkiewicz (2011) examined the implications of two kinds of instruction (implicit or explicit) of a focused communication task on the learning of past conditionals in English. Participants were 45 second language English speakers enrolled in college. Both groups of students were exposed to input-based instruction through a written text with examples of the third conditional. Students were then asked to answer to comprehension questions in order to aid them to make form-meaning connections. Metalinguistic explanation was granted for both groups. For the practice section each group received different tasks. One of the groups received implicit instruction and was performing focused communication tasks (imitating real-life communication) in pairs or small groups while the other was performing explicit instructed activities through text-manipulation and writing productions. Results showed that both kinds of instruction were beneficial for improving explicit knowledge, but explicit instruction seemed to improve implicit knowledge as well.

Chen, Dienes, Guo, Ma, Zhang, Zheng, Zhu, and Yang (2011) found a different conclusion. They examined the implications of implicit and explicit instructions on the acquisition of semantic prosody in the L2. Participants were fifty-eight Chinese students that are highly proficient speakers of English. They were instructed about six pseudo-words based on the prosody of English words for which Chinese native speakers are known for having difficult learning. Three of the words selected for the study have a positive semantic prosody (*promote, enhance, career*) while the other three have a negative one (*cause, commit,* and *totally*). For the training sections the selected words were exchanged for pseudo-words, but the sentences in English were taken from several corpora and used for the instructions. The pseudo-words were underlined and highlighted in order to promote awareness from learners. Two groups received equal language input, but one group was instructed to infer meaning while the other was asked to reason the rules of each underlined structure. Students were tested on their knowledge of the words in accurate and inaccurate sentences. The tests elicited whether the participants found the sentences to be correct or not; their confidence of knowledge; and the

nature of their knowledge as guessing, intuition, memory, and rule. The findings indicated that both kinds of implicit and explicit knowledge were observed in the study, with an advantage of explicit instruction over implicit instruction, since evidence suggested that explicit conditions enhanced both kinds of knowledge about the semantic prosody of the L2 as opposed to implicit instruction.

When investigating the semantic knowledge of children and adults, Ionin, Philippov, and Zubizarreta, (2009) presented evidence that it might be related to different conditions rather than the kind of instruction. In the study, Russian speakers were examined in their production of English as a second language. Twenty-six adults and fifty-eight children were tested on their semantic knowledge of English articles through a written elicitation test in which students were presented with 60 short dialogues with blank spaces. The testing phase evaluated the responses according to kind of awareness students showed in each answer in order to evaluate the knowledge as explicit or implicit. Participants were asked to fill in the blanks with the appropriate article. Results suggested that both children and adults rely on implicit semantic knowledge, but adults tend to rely also on explicit semantic knowledge.

Overall, in regard to the age factor, there is evidence that children tend to rely more on implicit semantic knowledge than adults. The most highlighted feature was that, although both kinds of knowledge can be perceived, there is an advantage of explicit instruction for semantic development since it can improve both semantic implicit and explicit knowledge at the same time.

3 DISCUSSION

The studies analyzed provide evidence that both kinds of knowledge are engaged in the learning of syntactic features in SLA. Studies showed that the use of explicit instruction for teaching syntactic structures can improve both implicit and explicit knowledge. Concerning implicit instruction, studies demonstrate that it can be used for the rapid learning of complex structures such as VSO relationship in contextualized conditions. Also, implicit knowledge about the syntax of an L2 can be identified with no further indication of explicit knowledge. That is, syntactic properties about the L2, whether they include complex structures or not, can be taught through implicit or explicit instruction. The main distinction between the two is that explicit instruction was found to have a larger impact on both kinds of knowledge (implicit and

explicit) when compared to implicitly instructed syntactic content only. Additionally, it was found that explicit instruction might be especially beneficial for the learning of unique L2 syntactic structures.

For teaching syntax in a second language classroom, it is important to understand that implicit instruction, in order to be beneficial, must be settled in contextual settings. That is, implicit syntactic learning is due to be more efficient under extensive input embedded in a contextualized text or audio input. In this sense, students should have their knowledge mostly improved when reading authentic material and performing implicitly instructed comprehension tasks for which the aim is to assert their communicative skills. Explicit instruction, on the other hand, might be the best choice when addressing the syntactic differences between the L1 and the L2. As an example, from my experience, Brazilian learners regularly need to be instructed about the SVO order of English in their writing productions, since the change of order in sentences presents a major cohesion issue in English.

As for the teaching and learning of lexical content, both kinds of knowledge seem to be engaged but explicit instruction seems to provide better results. Studies show that knowledge about vocabulary is both explicit and implicit. Regarding the kind of instruction on vocabulary teaching, evidence demonstrates that explicit instruction of lexical content is more beneficial for durable effects than implicit instruction, with explicit instruction being more efficient to the acquisition of lexical content in the L2 overall. In this sense, vocabulary learning seems to be better enhanced through the use of traditional translation methods – the most direct, simple and faster resource for explicit instruction on lexicon. Word lists and dictionary entries are also an asset for explicit vocabulary learning. For the implicit teaching of lexicon, as with syntax, the best option is to present contextualized content, as with the use of visual aids or the targeted words embedded in a text.

Regarding the acquisition of pragmatic competence, most of the findings indicate an advantage of explicit instruction over implicit teaching. Although some studies provide evidence that both kinds of instruction lead to the acquisition of pragmatic features, explicit instruction appears to be more effective when the targeted language item differs in both languages. As a result, awareness seems to be essential in the learning of unique pragmatic features in L2. Not only students' knowledge about such differences should be granted but also their declarative knowledge about them, especially if students are willing to travel abroad or to be in contact with other speakers of the targeted language, as pragmatic stances are directly related to cultural aspects of a language. In this sense, the fact that Asian students should not bow when making thanking utterances needs to be addressed by the ESL teacher in order to

avoid confusion and misinterpretations across languages, since cultural aspects are an essential aspect of pragmatic competence. The fact that students may be only exposed to input (even in a visual form) does not reassures students' awareness about it. In this sense, explicit pragmatic knowledge can be easily addressed in the classroom through a round of discussion between the students themselves. In an activity like this, students are able not only to share knowledge but also to explicitly formulate their pragmatic knowledge.

Likewise, phonetic content seems to be acquired under implicit and explicit instruction. However, most of the studies indicated that explicit instruction is an important process in the learning of phonetic features, especially when the L2 structure differs from the L1. Additionally, the studies that investigated explicit instruction of pronunciation provided evidence that it can have delayed effects. On this regard, phonetic differences between the L1 and L2 must be addressed in the classroom. One example is the ending sounds of the past verbs in English, Brazilian learners usually present difficulty in perceiving and also producing the distinct sounds of -ed verbs in English: want /t/ – wanted /ɪd/ and hope /p/ - hoped /t/.

Morphological content also seems to be enhanced through both implicit and explicit instruction. Yet, implicit instruction seems to only improve implicit morphological knowledge and its learning appears to depend on the learners' proficiency level. Also, implicit conditions are more effective when the L1 morphological content is similar to the L2. On the other hand, explicit instruction seems to improve general morphological awareness of L2 content. In this case, teachers should mostly use explicit conditions in teaching morphological aspects specially in lessons for beginning learners. The disparities between the L1 and the L2, when understood, might refine students' perception of the language as a whole, giving them confidence to reason the construction of the L2 more clearly. For instance, students might learn general semantic features through the learning of word formation. When students learn the use of suffixes such as -ed, they start to understand that -ed ending words might refer to a verb in the past or to an adjective. Such confusion of mixing suffixes and affixes is a common misunderstanding made by Brazilians learning English as a second language, even in high-proficiency levels. The explicit explanation of use and form of such structures might assert their general understanding of English by raising their awareness about it.

The majority of the studies analyzed demonstrated that semantic content can be learned both implicitly and explicitly. Nevertheless, explicit instruction conditions showed an overall advantage because they improved both implicit and explicit semantic knowledge, as opposed to implicit instruction. A study that investigated the differences of both kinds of knowledge provided evidence that the factor of age has a direct effect on the kind of knowledge students

rely more, where adult learners tend to rely more on their explicit semantic knowledge while children rely mostly on implicit semantic knowledge. Therefore, children that are learning a second language should receive more implicit exposure to language than adults.

As studies indicated, every language aspect relies on both implicit and explicit knowledge in the process of learning a second language. That is, the learning of a foreign language is supported by both conscious and unconscious knowledge. Such fact is relevant to the understanding that the acquisition of a second language relies on both kinds of instruction, despite the traditional approaches perspective that explicit knowledge alone is sufficient and efficient for learning a foreign language. Therefore, based on evidence from the reviewed literature, it is possible to conclude that both implicit and explicit knowledge must be targeted in second language teaching in order to improve students' communicative competence.

Although the majority of studies indicate that both kinds of instructions showed positive improvements of students' knowledge, some kinds of instruction seemed to be more beneficial to particular linguistic competences. In this sense, explicit instruction demonstrates to improve every language feature investigated, while implicit instruction denotes to better enhance the acquisition of a second language when combined with some kind of explicit instruction to direct attention to form. The following table demonstrates the general advantage of explicit instruction according to the language features in SLA:

Table 2 – General findings of each kind of instruction according to different areas of language competence.

	INSTRUCTION	
	IMPLICIT	EXPLICIT
Syntax	×	×
Lexicon		×
Pragmatics		×
Phonetics		×
Morphology		×
Semantics	×	×

SOURCE: author.

In relation to the models presented by Ullman (2001a; 2001b) and Paradis (2004; 2009), knowledge about vocabulary seems to be strongly to correlated to the explicit memory system. As both authors propose, the learning of idioms, verb complements, and morphemes are also

best acquired under explicit conditions while the learning of more abstract features of language such as syntax, and semantics are associated with implicit learning conditions. It can be concluded, therefore, that memory performance implicates in the way instruction should be used by second language teachers.

Particularly for courses of language learning for specific purposes, explicit instruction might be beneficial. The benefits of focusing on this kind of instruction is that it provides a targeted learning condition. In some cases, this is better for optimizing the time spent in lessons because explicit learning requires less amount of language input. One example of this are courses that are focused on improving students' performance on proficiency tests (like TOEFL and IELTs). Students might benefit more from explicit input about certain language content since the test evaluates mostly students' explicit knowledge.

On the other hand, implicit instruction might benefit students who aim to develop their fluency and achieve native-like performance. In this case, students who are most interested in acquiring language under incidental conditions as well as receiving enhanced language input are due to improve implicit language performance. Implicit input seems to have a unique role in the acquisition of syntactic structures as well, since exposure to input might grant that the developmental stages of the acquisition of an L2 occurs implicitly.

Another relevant matter was presented in the general findings: the implications of age and proficiency levels in the outcomes of explicit and implicit knowledge. It was found that age directly affects semantic knowledge - children may acquire and store semantic knowledge relying more on implicit knowledge while adults show better improvement relying on explicit knowledge. Proficiency level also showed direct outcomes in the nature of language knowledge. In this sense, lower-level speakers tend to rely more on their declarative memory than high-level speakers. Thus, explicit instruction seems to be essential in the teaching of explicit knowledge of vocabulary to young children and beginning learners of a foreign language.

In conclusion, although a general advantage of the explicit kind of instruction was found, it is important to notice that a more complete and efficient second language teaching can be achieved through the practice of both implicit and explicit instruction combined. This is the most elaborated and advantageous teaching type of instruction since it is responsible for enhancing students' explicit and implicit competences, improving their fluency and punctual knowledge at the same time.

4 CONCLUSION

This work analyzed recent publications on the field of Second Language Acquisition that contrasted two types of instruction, explicit and implicit, for the learning of different areas of language competence. A general advantage of explicit instruction was found, with an exception of implicit instruction being more beneficial for the teaching of semantics and syntax. Additionally, it was noticed that the implications of each kind of instruction seems to be correlated to other factors such as age of learners, level of proficiency, contextualization of instructions and complexity of the structures that are being taught.

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