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Zásady pro vypracování

Studentka se bude ve své bakalářské práci zabývat konektivismem, resp. emergentismem, což je jedna z novějších teorií osvojování druhého jazyka, konkrétně angličtiny. Nejprve představí uvedenou teorii a její klíčové koncepty, explicitní a implicitní učení, a vztah mezi nimi. Dále vypracuje přehledovou studii o výzkumu v oblasti implicitního učení angličtiny s cílem zjistit, jak implicitní učení přispívá osvojování anglického jazyka a kterých jeho aspektů se týká. Pro systematický výběr studií studentka využije databáze Web of Science a Scopus a vyhledá v nich relevantní odborné články publikované v angličtině za definované období.

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- Dörnyei, Zoltán. 2009. *The Psychology of Second Language Acquisition*. Oxford University Press
- Ellis, N. 2005. At the interface: Dynamic interactions of explicit and implicit language knowledge. *Studies in Second Language Acquisition*, 27, 305-352. Retrieved from DOI: 10.1017/S027226310505014X
- Ellis, Nick C., and Annette M. LaPointe, eds. 2009. *Implicit Learning and Language*. Hove. East Sussex: Psychology Press.
- Gavora, Peter. 2000. *Úvod do pedagogického výzkumu*. Brno: Paido
- Hummel, Kirsten. 2014. *Introducing Second Language Acquisition: Perspectives and Practises*. Wiley-Blackwell
- Krashen, Stephen D. 1981. *Second Language Acquisition and Second Language Learning*. Pergamon Press.
- Mareš, Jiří. 2013. Přehledové studie: jejich typologie, funkce a způsob vytváření. *Pedagogická orientace* 23 (4), 427-454.
- Ortega, Lourdes. 2013. *Understanding Second Language Acquisition*. Routledge
- Reber, Arthur. 1993. *Implicit Learning and Tacit Knowledge: An Essay on the Cognitive Unconscious*. New York: Oxford University Press.
- Saville-Troike, Muriel. 2012. *Introducing Second Language Acquisition*. Cambridge University Press

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ANNOTATION

This bachelor thesis focuses on explicit and implicit learning of languages in the context of second language acquisition. The theoretical part deals with defining second language acquisition, presenting second language acquisition perspectives and describing explicit and implicit learning and knowledge. The practical part aims to structure a traditional review to answer established research questions about implicit learning of English.

KEYWORDS

second language acquisition, implicit learning, explicit learning

NÁZEV

Explicitní a implicitní učení anglického jazyka: přehledová studie

ANOTACE

Tato bakalářská práce se zaměřuje na vědomé a nevědomé učení cizích jazyků v rámci osvojování druhého cizího jazyka. Teoretická část se zaměřuje na definování osvojování druhého cizího jazyka, představuje teorie osvojování druhého cizího jazyka a popisuje vědomé a nevědomé učení a znalosti. Cílem praktické práce je pomocí přehledové studie odpovědět na předem stanovené výzkumné otázky o nevědomém učení anglického jazyka.

KLÍČOVÁ SLOVA

osvojování druhého jazyka, nevědomé učení, vědomé učení

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ABBREVIATIONS

SLA – Second language acquisition

L1 – First language, mother tongue

L2 – Second language, additional language

UG – Universal grammar

EFL – English as a foreign language

TC – Tense consistency

INTRODUCTION

Language is a fundamental aspect of human communication and culture, playing a significant role in social interaction. In a world where everyone is exposed to language from birth, it is only natural that there would be a research field dedicated to how languages are learnt or acquired. This field is called language acquisition, with second language acquisition being one of its most prominent branches. Second language acquisition investigates the processes through which individuals learn a language other than their native tongue, whether it be a second language or any additional language beyond that (Ortega 2009, 3-4). Within second language acquisition, two theories have greatly interested many researchers – explicit (conscious) and implicit (unconscious) learning, which are the main focus of this thesis. These approaches explore different mechanisms by which language learners acquire new language knowledge and skills.

This thesis is structured into two main parts - the theoretical part and the practical part. The theoretical part comprises five chapters that serve as a theoretical background for understanding the concepts of the practical part. The first chapter offers a comprehensive definition of second language acquisition in the context of the language acquisition research field. It explores the dual meaning of second language acquisition, highlighting that it can refer to the process of learning a second language or a research field dedicated to exploring second language acquisition. Additionally, the chapter discusses how some authors use the terms acquisition and learning interchangeably, whereas others differentiate the two. The second chapter provides an overview of the history of developing second language acquisition theories and then narrows its focus on the two perspectives by Douglas H. Brown. Two SLA theories that Douglas presented under the two perspectives are then described in greater detail in the following chapters. The third chapter describes the theory of emergentism and, furthermore, connectionism. The chapter defines these second language acquisition theories and explains their connection. The fourth chapter focuses on defining the key aspects of emergentism that are the main topic of the thesis - explicit and implicit learning. Furthermore, it addresses their use in L1 and L2 learning, as well as the limitations associated with implicit L2 learning. Next, one of the implicit L2 learning limitation is discussed in a subchapter. Lastly, the fifth chapter provides additional context by exploring the relationship and connection between explicit and implicit knowledge, specifically how explicit instruction can influence implicit learning and knowledge.

The practical part is structured as a traditional review that aims to answer established research questions about the contribution of implicit learning to SLA and the areas that can be

implicitly obtained. This part consists of three chapters. The first chapter presents the methodology used to structure the review, and it primarily references Jiří Mareš and his work titled “Reviews: Their Typology, Functions and How to Write Them”. Moreover, it introduces the research questions, publication sources, and keywords used to find the studies. It also specifies the time frame the studies were published to ensure their relevance for the review. The second chapter then focuses on the studies selected for inclusion in the review and provides a detailed description of these studies. Finally, the third chapter analyses the studies by gathering their findings and answering how they address the research questions posed in the methodology chapter. It also includes a subchapter dedicated to discussing possible research limitations.

1 THEORETICAL BACKGROUND

The theoretical part provides a theoretical background necessary for comprehending the topic and theme of the practical part. It is organised into five chapters that sequentially build upon one other. The first chapter defines the term second language acquisition. The second chapter presents selected perspectives on SLA. The third chapter focuses on two specific SLA theories: emergentism and connectionism. Finally, the fourth and fifth examine the key aspects of these theories, namely implicit and explicit learning.

1.1 Defining Second Language Acquisition

Language is essential to human nature, culture, and community. People are exposed to language from birth, first acquiring their mother tongue during childhood, and essentially other languages, usually at school. It is an important aspect of human communication; therefore, language acquisition is a field of interest for many researchers.

There are a few research fields of language acquisition that can be studied. For example, Ortega (2009, 3-4) delineates three research fields in language acquisition. The first is first language acquisition, also called child language acquisition, which explores the cases of children who acquire only one language during childhood. Next, the occurrence of a child learning two languages before the age of four is studied by the field of bilingualism, or multilingualism, in the case of learning more than two languages. The third is second language acquisition, which, as Ortega (2009, 4) and Saville-Troike (2012, 2) mention, delves into acquiring language after the initial one is entrenched. Notably, in SLA, the label “second language” refers to any language a person undertakes to learn after L1 or L1s, meaning it can be a third, fourth or even tenth language (Ortega 2009, 5).

However, scholars vary in the precise usage of the term second language acquisition. For example, Ellis and Barkhuizen (2005, 3), as well as Ortega (2009, 5) and Ellis (1997, 3), distinguish the term SLA, which refers to the field of studying the process of learning a second language, and L2 acquisition, indicating the process itself. In comparison, Saville-Troike (2012, 2) employs SLA for the field of study and the process, and Li (2019, 497) uses SLA and L2 acquisition as synonyms, referring to the process only.

Furthermore, many authors also differentiate between language acquisition and language learning, making it arduous to define SLA. According to Krashen (1981, 1), language acquisition

is subconscious, while language learning is conscious. In contrast, Ellis (2015, 19) uses the terms interchangeably, which can be supported by Ortega (2009, 5), who, even though she acknowledges the attempts to define the two terms differently, mentions that contemporary SLA terminology generally does not distinguish them.

In conclusion, second language acquisition can refer to either the field of study, the process of acquiring language or both. Moreover, some authors use the terms acquisition and learning separately while others define them as the same term. In this thesis, second language acquisition will reference the process, not the field (unless specified), without distinguishing the terms language acquisition and learning process for better clarity.

1.2 Second Language Acquisition Perspectives

Everything we do in life is part of a process involving a series of actions to achieve a specific result. Applying this definition to language acquisition, a process is a series of actions the learner takes to acquire a language. In parallel with numerous other processes of language acquisition, second language acquisition encompasses many perspectives, or, in other words, many theories about how the learners acquire an L2.

The origins of SLA theories start in the 20th century. As delineated in Myles's (2010, 321-322) research timeline, the first views on SLA can be traced back to 1945. Myles (2010, 321) states that during this time, researchers mainly connected L2 to the leading learning theory of that time - behaviourism. This perspective posited that teaching by comparison of the L1 and L2 of the learner, or in other words, what is different and, therefore, more complicated in L2, would result in accurate and fluent foreign language habits (Fries, cited in Myles, 2012, 322). Similarly, Menezes's (2013, 404) view on the behaviourist theories states that they work with the linguistic environment and stimuli rather than inner processes and that "to acquire a language is to acquire automatic linguistic habits." Subsequently, the 1960s proclaimed a transformative phase catalysed by Chomsky and his L1 acquisition "revolution" that caused a reorientation of SLA research; specifically, researchers shifted their focus from simply describing L1-L2 pairings to the actual output of L2 (Myles 2010, 321). Ellis (2021, 191) labels this period as "making a start", indicating a true beginning of SLA studies.

In the following decades, many other theories have been advanced in SLA. Among these researchers, Brown's (2014, 286-305) classification stands out, sorting SLA perspectives into six categories: maturation-based approaches, cognitive models, sociocultural viewpoints, identity

approaches, ecological viewpoints, and dynamic system theory. The focus will be on maturation-based approaches and cognitive models, with a brief overview. Then, a specific focus will be put on two theories of the two perspectives needed to understand the theoretical background of this thesis.

When referring to maturation-based approaches, explaining what they are about is essential. This perspective is connected to the maturational theory that states that development happens naturally and is primarily influenced by our genes and brain processes (Dixon 2006, 12-43). Applying this to language acquisition, maturation-based approaches deal with the natural development of a language.

Returning to Brown (2014, 288), he begins the maturation-based approaches chapter by presenting a claim about language acquisition made by Chomsky (cited in Brown, 2014, 288), McNeill (cited in Brown, 2014, 288) and their contemporaries that states that each person is capable of innate language acquisition. Nonetheless, this assertion was created primarily in connection to the L1 acquisition. Furthermore, Brown (2014, 288) says that within the maturation-based tradition, claims about SLA emerged soon after, and he presents its few perspectives.

One of the most known figures in the field of second language acquisition is Stephen D. Krashen. Brown (2014, 288-289) refers to Stephen D. Krashen's five hypotheses regarding SLA in "*Principles and Practice in Second Language Acquisition*." The first hypothesis, "acquisition-learning distinction", is about developing competence in a second language (Krashen 1982, 10). According to Krashen (1982, 10), adults can either acquire or learn a language. This distinction is essential in SLA and will be examined in greater detail in chapter 1.5 due to its relevance to the concepts of explicit and implicit learning and knowledge, which are the central themes of that chapter.

The second hypothesis is "the natural order hypothesis", which states that there is a particular order in acquiring rules of grammatical structures of a language (Krashen 1982, 12). The third hypothesis, "the monitor hypothesis", expands the acquisition-learning distinction by stating how a person uses the two processes when producing a language: acquisition for the impetus of the utterance and learning for monitoring and editing mistakes in the utterance, but only if certain conditions of time, focusing on form and knowing the rules are present (Krashen 1982, 15-16). For the same reasons as the acquisition-learning distinction hypothesis, the connection to explicit and implicit learning and knowledge, the monitor hypothesis will also be further focused on in chapter 1.5.

The fourth of Krashen's (1982, 20-21) hypotheses is called "the input hypothesis", which is the most talked-about principle in maturation-based approaches. Its definition states that „we acquire, in other words, only when we understand language that contains structure that is "a little beyond" where we are now.“ In Myles's (2010, 326) words, the input hypothesis is about exposure to input slightly surpassing a person's current level of linguistic development, which Krashen (1982, 20-21) depicts by "i+1", where "i" is current competence and "+1" is the next level of the competence. Lastly, Krashen (1982, 30-31) presents "the affective filter hypothesis" that describes the effect of affective factors on SLA, such as motivation, self-confidence, or anxiety.

However, Krashen's hypothesis, especially the input hypothesis, has been criticised by numerous researchers. For example, according to White (cited in Brown 2014, 289-290) and Gregg (cited in Brown 2014, 289-290), there is no precise definition of either "i" or "+1" regarding the input hypothesis. Other criticisms of this and Krashen's other hypotheses debate consciousness, interface, no explicit instruction, and the occurrence of the output hypotheses (Brown 2014, 289-290). Despite the criticism, Krashen's hypotheses still heavily shaped language teaching in the United States during the 1980s and 1990s (Saville-Troike 2012, 48). That means that even though criticised, Krashen's hypotheses were essential for the development of language teaching and SLA research, which is why the focus on them was more extensive than on the following perspectives from Brown's classification.

The following perspective Brown (2014, 290) classifies within the maturation-based models is Universal Grammar. In his book "*Syntactic Structures*", Chomsky first introduced what would become UG, proposing similarities between languages and positing that a core set of universal principles can delineate all human languages (Hummel 2014, 67). Nevertheless, Dörnyei (2009, 83) argues that UG does not align with language acquisition theories because it is not clear how the biologically driven progression towards attaining a native-like grammar system occurs. For that reason, there will be no further focus on UG.

Proceeding to Brown's (2014, 292) second set of perspectives, cognitive models, or cognitivism, it is crucial to define cognition first. Ortega (2013, 82) posits cognition as a process of the human mind assimilating and comprehending information. According to Hummel (2014, 75), cognitivism leans heavily on cognitive psychology, from which cognitivism emerged in the 1950s. Furthermore, in connecting cognitivism and SLA, Ellis (2015, 191) states that cognitive SLA deals with cognitive mechanisms that are operative when acquiring a second language. In other words, cognitive models are theories that deal with the human mind's processes during SLA.

Brown's (2014, 292-293) first cognitive model presented is an attention-processing model. This perspective is heavily connected to the phenomena of consciousness; however, defining it is a complex problem, resulting in researcher Barry McLaughlin's shifting the focus to controlled and automatic processing, terms linked to human cognition (Brown 2014, 292). Both are also associated with another cognitive approach to SLA, information processing, by Ortega (2013, 83-84) and Hummel (2014, 76). Information processing is a cognitive approach that claims that learning a language is not different from learning any other skills or areas of knowledge (Saville-Troike 2012, 77) and that when acquiring and using language, we use the same mental processes as when interpreting any other experiences (Hummel 2014, 75).

Returning to the issues of the two mentioned terms, Brown's (2014, 292) definition of controlled processing demonstrates that when individuals, mostly L2 beginners, learn a new skill, they can obtain only a certain number of elements of the skill. In addition, Hummel (2014, 76) asserts that learning new skills takes a lot of time and effort and has limitations in short-term memory restraint. Moreover, self-regulation is essential to controlled processing, and many cognitive resources are present (Ortega 2013, 84). As Hummel (2014, 76) points out, with enough practice and training, automatic processing can overrule controlled processing; in other words, the skill is carried out briskly without conscious effort and limitations of short-term memory. Besides that, automatic processing is seen in more advanced learners, and the brain's capacity simultaneously manages multiple pieces of information (Brown 2014, 292). In contrast to controlled processing, only a few cognitive resources are present during automatic processing, resulting in the possibility of multiple automatic processing performed at once and being connected (Ortega 2013, 83).

The following perspectives presented in cognitive models are interlanguage systematicity and variability (Brown 2014, 295). Their main goal is to answer the questions regarding the predictable sequence of acquisition, patterns of error, stages of progress toward the learner's goals and explanations of variability (Brown 2014, 295). Nonetheless, Brown (2014, 295) argues that focus has decreased on discovering systematicity in SLA in recent years, placing importance on identity, interaction, and tantalising ecology of SLA. For that reason, no further focus will be placed on this perspective.

Up to this point, Brown's two SLA perspectives have been introduced in this chapter, except for one model from each perspective: emergentism and implicit and explicit processing. The rationale behind this omission is that, according to Brown (2014, 288-293), they belong to

two separate perspectives, placing emergentism within maturation-based approaches and implicit and explicit processing within cognitive models. However, Ellis (2021, 194) categorises emergentism and implicit and explicit knowledge (connected to implicit and explicit processing and learning) under a phase in the late 1990s and onwards, which he terms the cognitive phase, meaning that both are associated with cognition. Ortega (2012, 102-105) likewise classifies emergentism under cognitive SLA theories, and another supporting argument comes from Hummel (2014, 86), who connects emergentism to cognitive science. Even Brown (2014, 292), though not putting emergentism within the cognitive models' set of perspectives, acknowledges that every SLA theory/model is linked with cognition. Therefore (and because these terms are the main focus of this thesis), rather than defining the two terms earlier within the framework of Brown's perspectives, emergentism and implicit and explicit learning will be explained separately.

To summarise, second language acquisition has been studied for more than seventy years, resulting in many different theories and hypotheses by various authors. Douglas H. Brown classified some of these into six perspectives, each containing multiple SLA theories. The essential ones for this thesis are maturation-based approaches and cognitive models. While maturation-based approaches deal with growth and development, cognitive models focus on the human mind and its processes. Each perspective encompasses one critical SLA theory for this thesis's theoretical background: emergentism and implicit and explicit processing, which will be introduced in the following chapters.

1.3 Emergentism and Connectionism

Second language acquisition aims to answer how a person acquires a second language. This process has been studied since the latter half of the 20th century, which allowed for an increase in SLA perspectives. In other words, as the field of second language acquisition grows, so does the number of SLA theories. This chapter will introduce two of those theories in more detail.

The first theory described in this chapter is emergentism, or emergence, as Dörnyei (2009, 112) also calls it. It was introduced in the previous chapter (1.2) as part of Brown's (2014, 291) SLA perspectives called maturation-based approaches. Its foundation comes from information processing, which was also introduced in the previous chapter (Ortega 2013, 103). Ortega (2014, 291) notes that it is a relatively new perspective, only making its way into cognitive SLA research in the last few years. However, despite being new, it was already very popular (Dörnyei 2009,

112) and “the most promising new trend in language studies” (MacWhinney, cited in Dörnyei, 2009, 112).

As stated, emergentism is a relatively new theory in SLA, but the term itself is not. The origins of emergentism, though not in connection to language or language acquisition, have roots in the 19th century, when a British philosopher, John Stuart Mills, proposed the idea that “a system can have properties that amount to more than the sum of its parts” (Hummel 2014, 86). This was later applied to language acquisition. As the name of this perspective implies, emergentism is connected to the word ‘emergent’. In simple words, emergent means something appearing (Dörnyei 2009, 112), usually unexpectedly, which would be the language in the case of SLA. However, the language does not appear out of nowhere but rather by using and practising it (Hummel 2014, 87). In addition, Ellis (2003, 81) states that “the complexity of language emerges from a relatively simple developmental process being exposed to a massive and complex environment“. Simply put, when a person is surrounded by language, the developmental processes in the brain interact with this environment, resulting in language development. This statement shows the connection of emergentism to usage-based approaches, which advocate the theory that language emerges from a real-life situation in which communication is used (Hummel 2014, 87). In summary, a simple definition of emergentist states that language will appear if the learner is exposed to language and uses and practices it.

Nevertheless, emergentism, as a language acquisition theory, has a few problems. Firstly, in SLA, there is not enough detail about how emergentism actually works, and if the individual parts (emergent properties) of the process are not understandable, the product of the process (emergent product), in this case, language acquisition, cannot be understood (Ellis 1998, 645). Secondly, emergentism has its limitations in explaining regularities and universals while also lacking established research methods and not yet providing enough detailed information about the emergent processes (Dörnyei 2009, 116). Dörnyei (2009, 116) adds that another problem with emergentism comes down to the unpredictable nature of emergent processes and mentions MacWhinney (2006, cited in Dörnyei 2009, 116), whose view on emergentism is that research should understand both its contributions and limitations.

For the reasons presented, emergentism is, in a way, tied to another language acquisition theory, and that is connectionism. This theory made its way into SLA research in the 1980s (Saville-Troike 2012, 84) and offers tools to study how emergent properties develop (Ellis 1998, 645). Saville-Troike (2012, 84) defines connectionism as an approach to second language

acquisition focusing on connections and associations between input and output. Similarly, Junio (2014, 3) described connectionism as links between thoughts, adding that the connections are made in the brain. According to Savile-Troike (2012, 84), learning acquisition emerges due to the strengthening of these connections. These cognitive developmental changes are of leading interest to connectionists (Bates and Elman 1993, cited in Shirai 2019, 18), and connectionism aims to explain these mental changes (Dörnyei 2009, 89).

As mentioned, the connectionist approach states that language appears when connections in the brain increase. Hummel (2014, 87) asserts that repeated exposure to specific language patterns leads to the strengthening of language connections in the brain. Hummel (2014, 88) provides an example of the regular plural form of English nouns “-s”. The more the learner encounters nouns ending in “-s” to denote plural, the more likely they will incorporate this pattern into their own communication. Furthermore, Koda (2007, 10) adds that one of this learning theory’s key concepts is frequency, as it maintains the connections the brain makes, thus defining learning “as a gradual transition from deliberate efforts to automatic execution”. This indicates the connection between conscious and unconscious learning and knowledge, which will be further introduced and explained in the following chapters.

In conclusion, the field of second language acquisition encompasses numerous learning theories, many of which are still being researched. Two of those are emergentism and connectionism. Emergentism is one of the newer SLA theories, positing that language emerges when the learner is exposed to a rich and complex language environment in which they not only process the language in the brain but also use and practice it. However, because this theory has significant limitations, researchers often draw upon elements from connectionism. This SLA theory focuses on examining cognitive processes in the brain, specifically connections in the brain that are formed in response to repeated exposure to linguistic patterns. Connectionism aims to explain these cognitive processes; moreover, connectionism presents the idea of an intentional effort to learn a language for automatic and effortless usage of the language through practice and repetition.

1.4 Explicit and Implicit Learning

There are two ways of obtaining a second language in the field of second language acquisition – explicit and implicit learning. The term “learning” can be replaced by processing, knowledge, awareness, or attention. While they have different definitions, when combined with the terms

explicit and implicit, they all refer to the same cognitive processes (Brown 2014, 294). This chapter will define both explicit and implicit learning in the context of SLA.

The first way of obtaining language is known as explicit learning, also referred to as intention learning or learning with awareness. This term's definitions are mostly straightforward among scholars. One of the more recent definitions is by Hulstijn (2013, 2632), who states that explicit learning is "a deliberate attempt to commit factual information to memory." In other words, when learning explicitly, the learner consciously attempts to learn new information or solve a problem (Dörnyei 2009, 136). To do that most effectively, the learner must consider different learning techniques, controlled practice or depth analysis (Ellis, cited in Dörnyei, 2009, 136). Explicit learning is primarily seen in a formal setting, for example, a classroom (Leow and Zamora 2017, 33), as the children go to school intending to learn, meaning making a conscious effort to do so. Furthermore, when learning intentionally, the learner expects their new knowledge to be tested, therefore they are aware of the learning process taking place (Dörnyei 2009, 140 – 141). In other words, when the learner is at school, they know that their teacher will test their new knowledge with a test – it can be, for example, a written test or an oral exam. This results in the learner consciously trying to learn because they need new knowledge to pass the test. Moreover, there have been attempts to apply not only explicit learning in the classroom but also implicit learning (Brown 2014, 294).

Implicit learning is another way of obtaining language. Defining this crucial term is essential to understanding second language acquisition better; however, while the definition of explicit learning is relatively similar among scholars, implicit learning is more complex. In the SLA field, the term was first coined by Arthur Reber in 1967 after doing an experiment in cognitive psychology called 'artificial grammar learning'. (1967, cited in Rebuschat 2015, XIII and Dörnyei 2009, 137) Reber's experiment involved a subject who unintentionally acquired knowledge of a complex, rule-governed stimulus environment and could use this knowledge without being aware of acquiring it. Though introduced by Reber, this term is not universally adopted in language acquisition. Instead, different authors might refer to implicit learning as incidental learning (Leow and Zamora 2017, 33) or learning without intention (Ortega 2013, 94).

Since Reber's experiment, researchers have tried to define and comprehend implicit learning. Dörnyei (2009, 137-138) describes implicit learning as obtaining and using new skills and knowledge without conscious awareness. Dörnyei (2009, 138) also adds five properties of implicit learning: bottom-up mechanism, no conscious attempt to learn the target material, lack of

awareness of learning, automatic process and lack of awareness of the result. Furthermore, the learner has no awareness of the knowledge learnt (Williams 2005, 269). Leow and Zamora's (2017, 35) definition is similar; according to them, when learning implicitly, the learner is unaware of the learning process and has no intention to learn. This means that a simple definition of implicit learning would be an unconscious process during which the learner unintentionally obtains new knowledge and can use it without being aware of obtaining it.

However, this definition does not align with some authors referring to implicit learning as incidental learning, as stated in the previous paragraph. According to Dörnyei (2009, 142), learning incidentally does not mean learning implicitly or without intention. Moreover, Dörnyei refers to Hulstijn (2003, cited in Dörnyei 2009, 142), who believes that incidental and implicit learning should be treated as two terms rather than the same, just like intentional and explicit learning, because both incidental and intentional learning needs the learner's attention and noticing. Nonetheless, in this thesis, implicit learning will be defined as previously stated – unconsciously learning and obtaining new information.

When the learner obtains new information, it becomes their explicit or implicit knowledge. One definition states that “implicit knowledge is information that is automatically and spontaneously used in language tasks, while explicit knowledge includes facts that the learner knows about language“ (Williams 2009, cited in Brown 2014, 294). Moreover, implicit knowledge is chiefly connected to L1 than to L2 because children learn their first language, e.g. the mother tongue, by communicating with their family, which means they acquire language by usage rather than by learning explicit rules of the language (Ellis 2011, 35). This means they can use the language correctly but cannot explain its rules (Brown 2014, 294). L2 can be acquired implicitly as well; however, some authors question the possibilities and limits of implicit learning of L2 learning. For instance, Ortega (2013, 94) asks the question of incidental L2 learning “is it possible to learn about the L2 incidentally, as a consequence of doing something else in the L2, or does all the learning have to be intentional?” Based on the research by various authors, she states that it is generally agreed that incidental learning is possible.

However, referring to Ortega's (2013, 94) views, learning without intention does not necessarily mean learning without attention. She states that when reading for pleasure, for example, the learner might not intend to learn new vocabulary; nevertheless, they can make a cognitive effort to discover the meaning of unknown words. In other words, the learner's intentions might change during the process, making it less incidental, which might be a problem when

defining implicit learning. Furthermore, although she does not dismiss the possibility of unintentional L2 learning, according to Ortega (2013, 94-95), learning with intention is more effective in second language acquisition, which is further supported by Ellis (2015, 12), who states that the amount of implicit knowledge the learner can obtain is limited.

To support this assertion, Corder (1967, cited in Ellis 2015, 12) claims that L2 learners do not absorb the language comprehensively despite being surrounded by it. To put it more simply, he distinguishes the language available to the learners and the language they acquire and can use. In addition, Perdue (1993, cited in Ellis 2015, 12) did the crosslinguistic, longitudinal ESP research project and, based on it, described the term 'Basic Variety', which means that the learners acquired language by communicating daily in their social environments; however, some got stuck at a certain level due to the lack of complex knowledge of morphology or syntax. Based on this finding, one can infer that implicit knowledge is indeed limited, and at a certain point, the learner must consciously engage in language learning to deepen their linguistic proficiency. This is supported by Ellis (2008, 1878), who states that if an adult wants to have an accurate L2, they cannot depend solely on implicit learning but must apply explicit learning to their L2 learning.

Having defined the terms, the focus turns to the question: how are explicit and implicit learning and knowledge connected to emergentism and connectionism? Firstly, the emergentist approach posits that language knowledge emerges from use, practice and exposure to the linguistic environment. This implies that implicit learning is a crucial aspect of emergentism because it involves the process of unconscious assimilation of language patterns and structures through exposure and usage of language. Explicit learning also contributed to emergentism, as explicit instruction can help learners notice linguistic features they might otherwise miss, thus resulting in the emergence of language knowledge.

Next, the connectionist approach models language learning as the formation of connections between input and output through repeated exposure without conscious effort, which suggests the connection between connectionism and implicit learning. On the other hand, explicit learning provides additional input that helps to strengthen specific connections. In other words, explicit learning helps to understand patterns that might not be as evident through implicit learning.

Both theories assert that learners acquire language through linguistic exposure and usage, indicating their connection to implicit learning. In contrast, the connection to explicit learning lies in the structured input and explanations that can help the learning process. Nonetheless, implicit

learning is the central aspect of both theories because it aligns with the idea of acquiring language from interaction with the linguistic environment.

In conclusion, by comparing different definitions by various authors, we can describe explicit learning as an intentional language acquisition process in which the learner is aware of obtaining new knowledge. Furthermore, when learning explicitly, the learner consciously uses different learning techniques or controlled practice and expects their knowledge to be tested after learning it. In contrast, implicit learning is a language acquisition process in which the learner obtains new knowledge and can use it without being consciously aware of it. However, that is only the top layer. Many aspects of implicit learning have been and are being researched, such as the overall possibility of it or how limited it is in connection to L2, as it is possible to learn L1 implicitly only. All things considered, these two processes are primarily connected to awareness, intention, and consciousness and play a significant part in second language acquisition, mainly in SLA theories of emergentism and connectionism.

1.4.1 A Limitation in Implicit Learning

It was mentioned in the previous chapter that L2 can be learnt implicitly, meaning it can be obtained naturally without explicit instructions; nonetheless, the possibility and limits are still discussed within SLA research. One of these limits and central debates in SLA research has been whether the learner's age plays a role in language acquisition - it is noted that in this subchapter, acquisition refers to implicit learning. - and, if so, to what extent. This subchapter briefly introduces this concept, mainly for its importance in one study in the review.

The age in SLA research is connected to the term “critical period”. Hummel (2014, 170) defines a critical period as a time period in a person’s life during which they can acquire behaviours and skills quickly and easily, without outside interface, meaning without explicit instructions, and Ortega (2013, 13) adds that time period is connected to the early stages of life. Furthermore, this concept is connected to the critical period hypothesis that states that the ability to acquire language fades after the critical period ends (Hummel 2014, 170).

Nevertheless, some studies showed support for the critical period hypothesis, while others contradicted it (Hummel 2014, 185 – 186). Moreover, those who support the hypothesis present further questions about the sources and consequences of the age factor in SLA (Dörnyei 2009, 263 – 264). This means that further research is still needed regarding this topic in SLA research.

1.5 The Connection between Explicit and Implicit Learning and Knowledge

Obtaining new knowledge after going through the learning process is a natural progression, as mentioned in the previous chapter. In SLA and the field of cognitive science, understanding the interface between explicit and implicit learning and knowledge is crucial for comprehending how the learner learns and applies information, specifically language knowledge. This chapter delves into defining explicit and implicit knowledge, explaining the relationship between explicit and implicit learning and knowledge and exploring their interaction.

Before explaining the relationship between explicit and implicit learning and knowledge, it is crucial to define the terms explicit and implicit knowledge, which have already been discussed in the previous chapter. Explicit knowledge, also called conscious knowledge, is the knowledge that can be verbalised; in other words, a person can explain and talk about their explicit knowledge, for example, grammar rules or lexical units (Dörnyei 2009, 143). In contrast, defining implicit knowledge is more complex as some authors argue that when you obtain knowledge, it means you know something, and knowing is a process connected to awareness (Dörnyei 2009, 143), meaning you are consciously aware of the knowledge obtained. However, a simple definition of implicit knowledge is that it is connected to automatic and spontaneous information usage (Williams 2009, cited in Brown 2014, 294). In addition, Esteki (2014, 1520) defines implicit knowledge as tacit and intuitive while adding that it can be observed only during L2 learners' communication because when communicating, the learners usually use the language without thinking about it.

Another way of defining and distinguishing the two types of knowledge comes from Ellis (2005, 151), who presents seven differences between explicit and implicit knowledge: awareness, type of knowledge, systematicity, accessibility, the use of L2 knowledge and self-report and learnability. To summarise all the seven points, explicit knowledge is defined as a conscious understanding of language rules. It is atypical and inconsistent and can be accessed by controlled processing. Moreover, it is the knowledge we can access when performing a planned L2 task; it is verbalizable and can be expended at any age.

In contrast, implicit knowledge is defined as an unconscious understanding of language rules. It shows variability but adheres to a systematic approach and can be accessed by automatic processing. Furthermore, accessibility of this knowledge is present primarily during the fluent performance. Implicit knowledge is also characterised by non-verbalization and can be potentially obtained only within a critical period. In conclusion, like explicit and implicit learning, the key difference between explicit and implicit knowledge is in awareness and consciousness, specifically

in consciousness and unconsciousness usage. Nonetheless, regardless of their differences, both are connected.

The connection between explicit and implicit learning, and therefore explicit and implicit knowledge as well, was considered from the beginning of implicit and explicit language studies. Referring to chapter 1.2, Krashen's "acquisition-learning distinction" hypothesis and "the monitor hypothesis" play a role in the early approaches to the relationship between explicit and implicit learning. Krashen (1982, 10), who triggered a great interest in implicit learning in second language acquisition, proposed that learners can develop their second language knowledge in two ways.

The first is language acquisition, an incidental process; the second is language learning, an intentional process. Furthermore, Krashen (1982, 10) viewed language acquisition as implicit learning, describing it as a subconscious process that leads to subconscious language use. In contrast, language learning was viewed as explicit learning, described as a conscious process that leads to knowledge (the rules) about the language (Krashen 1982, 10). Krashen's definitions of explicit and implicit learning align seamlessly with the definitions provided in the previous chapter. Moreover, Krashen (1981, 1) proposed "that these systems are interrelated in a definite way: subconscious acquisition appears to be far more important". In other words, implicit learning is considered superior to explicit learning; these two processes are separate but clearly connected, and because knowledge is a product of learning, this would mean the same for explicit and implicit knowledge – that implicit knowledge is superior to explicit knowledge, but both are connected to each other.

Later, more scholars added to the concept of interaction between explicit and implicit knowledge. One of them is Nick C. Ellis, one of the most critical scholars in the field of explicit and implicit learning and knowledge. Ellis (2005, 307) proposed that there is undeniable interaction, or interface, between the two types of knowledge, specifically that "language acquisition can be speeded by explicit instruction" and that "explicit types of instruction are more effective than implicit types, and that the effectiveness of L2 instruction is durable". In simple terms, acquiring a language can happen more quickly if explicit teaching methods are used, and if these teaching methods are direct and clear, they are more effective than the indirect ones; furthermore, this L2 instruction lasts over time.

This statement can be supported by Dörnyei (2009, 170 – 171), who implies that there is co-operation between explicit and implicit learning and knowledge. In Dörnyei's (2009, 170 – 171) view, the working mechanism of implicit learning can be supported by the co-operation of

the explicit learning mechanism. Furthermore, based on the evidence there is in SLA, developing sufficient implicit linguistic proficiency without explicit mechanisms is impossible, which, however, “does not necessarily mean that explicit learning creates implicit knowledge or that the explicit knowledge converted into an implicit currency”, enhancing the importance of explicit and implicit learning co-operation even more (Dörnyei 2009, 170 – 171). In other words, explicit learning and knowledge support implicit learning and knowledge, and Dörnyei (2009, 171 – 174) presents five ways explicit learning influences implicit L2 acquisition.

The first way states that “explicit registration of linguistic information allows implicit fine-tuning”. This co-operation lies in implicit language learning being like a brain that automatically organises and improves language skills by grouping words and patterns, tracking how often things happen and spotting language rules without realising it (Dörnyei 2009, 171). Nonetheless, this process can only happen by explicitly recognising the language input as a representation (Ellis 2002, cited in Dörnyei 2009, 171).

The second way suggests that “explicit practice creates implicit learning opportunities”. Implicit learning will automatically occur when the learners attempt to practise listening, reading, speaking or writing activities (Hulstijn 2002, cited in Dörnyei 2009, 171). Dörnyei (2009, 171) paraphrases this as “learners who have chosen to try to master an L2 with the help of grammar rules and are thus engaged in processing primary linguistic information...cannot prevent a process of implicit learning taking place simultaneously”. This means that implicit learning naturally takes place alongside explicit learning.

The third way posits that “explicit knowledge channels implicit learning”. The idea is that explicit practice uses detailed language information to guide the understanding of new language forms (Ellis 2005, cited in Dörnyei 2009, 171). This implies that explicit knowledge can set up a pathway for unconscious language processing to happen more easily (Dörnyei 2009, 171).

The fourth way asserts that “explicit rote learning can provide material for implicit processing”. This perspective refers to the experiment “artificial grammar learning” Arthur Reber made in 1967 (Dörnyei 2009, 172), which was mentioned in the previous chapter – participants unknowingly learned about a set of rules and were able to apply this knowledge without realising they had learned it. The perspective suggests that Reber’s experiment did not provide evidence for implicit learning alone but rather the co-operation of implicit and explicit learning (Dörnyei 2009, 172). In other words, originally memorised knowledge can increase the effectiveness of implicit learning (Dörnyei 2009, 172).

The fifth and last way suggests that “explicit knowledge fills the gaps of implicit knowledge”. According to this view, some language learners can use their explicit knowledge during conversations to cover the gaps in their implicit knowledge (Dörnyei 2009, 172 – 173). Furthermore, Dörnyei (2009, 173) adds to this perspective that “explicit learning increases the overall level of accuracy in implicit knowledge”. Implicit learning on its own does not guarantee perfect L2 proficiency, which is why adding explicit learning to the learner’s L2 learning is encouraged (Dörnyei 2009, 173). This aligns with Ellis's (2008, 1870) statement, mentioned in the previous chapter, that learners must convert to explicit learning to deepen their L2 proficiency and not rely solely on implicit learning. In summary, all five ways presented show that explicit learning and knowledge and learning greatly influence implicit learning and knowledge.

Other theories and additions to the connection between explicit and implicit knowledge can be found in the interface positions, as the interface between the two types of knowledge is usually discussed when explaining their relationship (Ellis 2005, 143 – 144). There are three in total: non-interface position, weak interface position and strong interface position. The non-interface position states that explicit and implicit knowledge is a product of dissimilar acquisitional mechanisms, and each is stored in a different part of the brain (Ellis 2005, 144). In addition, this position dismisses the possible change of explicit knowledge into implicit and vice versa (Dörnyei 2009, 160). In contrast, the strong interface position offers a different approach in that explicit knowledge can be transformed into implicit knowledge and vice versa with sufficient practice (Dörnyei 2009, 160).

Lastly, the weak interface position suggests that explicit knowledge can become implicit knowledge; however, limitations exist and are mainly connected to the time and manner of the transformation process (Ellis 2005, 144). The weak interface position, however, has its support in the form of connectionism. As mentioned in chapter 1.3, the connectionist approach states that through frequent practice, it is possible to convert conscious effort (which refers to explicit learning/knowledge) to learn a language into an automatic process, which could be defined as implicit/unconscious knowledge usage. To conclude, whether explicit and implicit knowledge can be transformed into the other one is a matter of the position the researcher advocates.

In conclusion, explicit knowledge represents the conscious understanding of language and its rules, while implicit knowledge represents the automatic use of information that the learner is not aware of possessing. These two types of knowledge, and essentially the two types of learning, are connected. The fundamental connection lies in how explicit learning and knowledge influence

implicit learning and knowledge. For example, explicit learning and instruction can help speed up the process of implicit learning. Furthermore, explicit learning and knowledge can help increase the level of language proficiency that is or was learned implicitly. However, depending on the interface the researcher favours, there are still divided opinions regarding the transformation of explicit knowledge into implicit and vice versa. Some argue that the transformation is possible, while others posit that it is not, which shows the need for further research in SLA. Nonetheless, the general conclusion from this chapter is that the connection between explicit and implicit learning and knowledge is unarguable and that explicit learning primarily influences implicit learning.

2 THE REVIEW

The practical part is structured as a review aiming to answer established research questions with three main chapters. The first chapter introduces the methodology used for conducting the review, including three subchapters that detail the research questions, publication sources, publication dates of the studies, and keywords used to select the studies. The second chapter offers an overview of the studies selected for the review. The third chapter provides an analysis of the studies, focusing on how they answer the previously established research questions. Additionally, this chapter also contains a subchapter dedicated to discussing the potential limitations of the review.

2.1 Methodology of the Review

This bachelor thesis focuses on providing a comprehensive overview of documented research within the area of second language acquisition, specifically implicit learning. Mareš (2013, 427-428) posited that this type of writing is considered a review and is vital before initiating new research. Despite the critical role of reviews in academic discourse, the students are often not introduced to the methodology of writing a review (Mareš 2013, 428); therefore, Mareš's "*Reviews: Their Typology, Functions and How to Write Them*" has been selected as the primary reference material used for this review's methodology due to its comprehensive coverage of essential information pertinent to this thesis.

Formulating a structured plan when writing any academic paper is essential; however, it is necessary to establish what the author wants to write about before planning the writing process. Mareš (2013, 335-440) suggests starting with selecting a suitable topic by its content and scope. In other words, the chosen topic should afford enough research material to write the review. Considering this principle, this bachelor thesis explores implicit learning in English language acquisition, where English is the second language a person acquires. This topic profoundly interests the author and many other researchers in second language acquisition, meaning the SLA field offers abundant research material for this review.

Given the numerous types of reviews, choosing the appropriate variant is another crucial step. Mareš (2013, 430-431) presents ten major review types: literature review, traditional/narrative review, mapping review/systematic map, systematic review, critical review, integrative review, rapid review, meta-analysis, meta-synthesis, and qualitative systematic review/qualitative evidence synthesis. The chosen type is the traditional/narrative review. This

review aims to summarise research within a desired area over a specified timeframe with the help of previously established research questions and present authors' views, agreements, disagreements, and conclusions concerning these inquiries (Mareš 2013, 235).

Next, the creation of a strategic plan needs to take place. The strategic plan of this thesis is based on the following steps Mareš (2013, 440) presents. First, finding the research literature regarding the topic and then analysing it to reduce the amount, resulting in having relevant research only. It is then analysed in detail and described. In addition, Ridley (2012, 64-65) suggests using reading and note-taking strategies, such as skimming the text first, then forming questions the text should answer, then making connections to what you already know about the topic, dividing the text into smaller unit if it is hard to understand and making notes. After gathering the research documents, Mareš (2013, 440) suggests making a comparison table of these findings and, based on it, identifying key characteristics that are then synthesised into a larger unit. The last step is to start writing a coherent text using these units and adjust it with the help of colleagues or experts, which in the case of this thesis is the supervisor, until the review is completed (Mareš 2013, 440).

In conclusion, writing a review is a long process which involves a lot of searching and reading. However, it is manageable with a well-thought-out plan, which goes as follows: select a suitable topic, choose an appropriate review type, find and analyse relevant literature, make a comparison table of the findings and write a coherent text. Furthermore, constructing a review is also manageable with established criteria further described in the next subchapters.

2.1.1 Research Questions

As mentioned in the methodology chapter, one of the key aspects of the traditional review is establishing research questions the review tries to answer. This bachelor thesis aims to answer two research questions about implicit learning of the English language in the context of second language acquisition. These questions are “How does implicit learning contribute to second language acquisition?” and “What do we learn implicitly in the English language?” The first question explores the impact and effectiveness of implicit learning in second language learning. The second question explores various language areas – grammar, vocabulary, spelling – and tries to identify those that can be learnt implicitly. Answering these research questions will contribute to the theoretical and practical understanding of implicit learning in SLA. The questions were chosen for their relevance in the SLA research field and the author’s personal interest.

2.1.2 Publication Sources

Knowing where to collect relevant data for the review is one of the main aspects to consider. The research literature for this thesis will be searched mainly on the Web of Science or Scopus. These online databases contain scientific literature suitable for bachelor thesis use, such as scientific journals, articles, or papers. Furthermore, the advantage of using these websites is their ease of use and the option to search for sources using keywords highlighted in the sources' titles, annotations, and keywords. This means that it is possible to see if all the keywords are presented in the sources without reading them, making it easier to decide whether they are relevant. Moreover, most of the sources on these websites are from the 21st century, making them suitable for this thesis's chosen period, as explained in the following subchapter. To summarise, online databases are suitable publication sources for this thesis because of their content, usage, and time relevancy.

2.1.3 Period and Keywords

When the sources are chosen, the author must know how to search for them to find the data they need. One of two crucial criteria Mareš (2013, 440) points out when searching in online databases is the period in which the research literature has been published. The field of second language acquisition and implicit learning of languages is of profound interest to many researchers, meaning new information is constantly being put out, resulting in outdated previously posted information. The chosen period of the collected research for this thesis is from the year 2000 onwards. This delimitation should ensure that the collected data is relevant and not outdated.

The second criterion Mareš (2013, 440) mentions is the usage of specific keywords. The more specific the keywords are, the better the chances of finding research that answers research questions. In addition, Ridley (2012, 64-65) proposes using the Boolean method - combining keywords into statements with the help of conjunctions 'and' or 'or', resulting in research containing all the keywords. The primary keywords used are "second language acquisition", "implicit learning", "English language", "contributions", and "language features". These keywords were chosen for their relevance to the research questions.

2.2 Overview of Studies

This chapter provides an overview of six studies selected for this review, all chosen for their pertinence to the research of implicit learning in SLA and their relevance to the research questions. Four studies from the original selection were excluded due to not meeting the criteria; specifically, these studies did not focus on the English language, L2 or failed to address the research questions.

2.2.1 Study 1

The first study focuses on filling the gaps in the effectiveness of context on implicit lexical knowledge. Specifically, this study deals with contextualised and decontextualised learning. Firstly, contextualised learning refers to learning in context; for example, when reading a book, the reader might come across new words they will learn in the particular context the book presents. In contrast, decontextualised learning happens without a broader context, usually using flashcards, wordlists or vocabulary notebooks containing the L1 definitions.

Based on specific criteria (gender, grade, good vision, etc.), fifteen Korean high schoolers were chosen as participants for this research and attended three study sessions across three weeks. In these sessions, they were directed to learn thirty English words in context by reading a short story and thirty without context by studying a wordlist with Korean counterparts of the words given. After the third study session, the students took an immediate vocabulary test and then waited five weeks to take a delayed vocabulary test, which assessed the explicit knowledge obtained. In addition, after the delayed vocabulary test, an EEG recording was made, meaning the researchers recorded the students' brain activity. The EEG recording assessed the implicit knowledge obtained.

The findings revealed that neither learning type was superior in developing implicit lexical knowledge. In contrast, the study indicated that decontextualised learning was more effective than contextualised learning for explicit lexical knowledge. Nonetheless, it is implied that contextualised learning can enhance decontextualised learning in terms of proper usage (grammatical functions, usage in a sentence or discourse, polysemous meanings, etc.), recommending the combination of both learning types to assess the learner's language proficiency accurately.

2.2.2 Study 2

The second study asks the question of whether children learn language implicitly faster than adults when exposed to input, as it has already been proven that children achieve better long-term language proficiency overall. This statement relates to both L1 and L2. This study aims to find if children can learn hidden linguistic rules faster than adults or if their long-term advantage of accurate language proficiency lies in other factors, such as environment or social consideration. This study hypothesises that children can indeed pick up the hidden linguistic rule faster than adults.

There were fifty-six participants in total – twenty-six children (age range: eight to ten) and thirty adults (age range: eighteen to thirty-five). The criteria for participation were having normal vision and hearing. Furthermore, the participants must not have taken medications that might interfere with normal brain functioning. Lastly, the participants had to be native English speakers. The last criterion causes a potential issue for this review, as the primary focus is on second language acquisition, and this study focuses on a hidden language rule in English with native English speakers. However, studies on native language acquisition can still be valuable in SLA and offer relevant contributions to SLA research.

The procedure consisted of two sessions, one in the evening and another one after twelve hours in the morning. This study introduced participants to four novel articles (gi, ro, ul, and ne), each followed by a noun representing either an item or an animal. "Gi" and "ro" indicated that the noun was near, while "ul" and "ne" signified that the noun was far. Participants were explicitly informed that two of the articles meant "near" and the other two meant "far." The task involved returning the nouns to their respective homes based on their location. Items belonged in the shop, and animals belonged in the zoo. On their computer screens, participants had two shops and two zoos, with one of each being near and the other far. For example, if presented with the phrase "ro shirt," participants would understand that the shirt was near, and they would place it in the near shop, not the far one. In addition, they were supposed to do the task as quickly as they could, enhancing the importance of speed and accuracy. However, this task included a hidden rule the participants had no prior knowledge about regarding animacy – two of the novel articles were linked to animate nouns. At the same time, the other two were associated with inanimate nouns. As mentioned, the aim was to discover whether children can pick up this inanimacy rule faster than adults.

The results showed that both children and adults could learn and use the inanimacy rule. Furthermore, the children picked up the rule during the first session. In contrast, adults understood the rule later in the second session, proving that the hypothesis the study established was correct. Lastly, these results support the idea that children have a real advantage over adults in learning languages, highlighting the importance of the critical period for language learning.

2.2.3 Study 3

The third study explores explicit and implicit knowledge of tense consistency (= TC) across elementary, intermediate and advanced English learners for whom English is an L2 (= EFL). In other words, this study focuses on English grammar, specifically on maintaining appropriate verb tenses in sentences and clauses. As L2 learners improve their understanding of verb tenses, their structure and rules, they should also improve at using different verb tenses correctly in various contexts. However, this area has not been studied much; therefore, this study aims to examine how well Iranian EFL learners use tenses correctly as their language skills improve, taking explicit and implicit knowledge into account. Moreover, the study asks whether explicit and implicit knowledge increases with a higher level of L2 proficiency. A gap-filling task was used to measure explicit knowledge of TC, and a spoken performance task was used to measure implicit knowledge of TC.

For this research, one hundred and fifty-four Iranian EFL learners, both male and female, aged between twenty-two and thirty-five, were chosen. Based on the Oxford Placement Test, the participants were divided into three L2 groups: elementary, intermediate and advanced. It has been observed that only intermediate and advanced learners possess explicit and implicit knowledge regarding TC. In contrast, elementary learners rely solely on implicit knowledge, meaning the explicit knowledge of elementary learners cannot be measured.

As mentioned, the procedure for every group consisted of two parts. The first one was a gap-filling task. In this task, the participants were required to fill in thirty blank spaces in a written story composed of compound sentences and three mixed time frames (past, present and future). As the goal of this task was to assess the participants' explicit knowledge, no time limit was given. This meant that participants could use their conscious knowledge of verb tense rules or, in simple words, think before they answered.

The second task was a spoken performance task. The participants were given pictures split into three piles based on the time frame they referenced (past, present, and future). The task was

to depict a story using the pictures as a reference. Furthermore, to make compound sentences, participants were also given a few subordinating and coordinating conjunctions, for example, “but”, “and” or “because”.

The results were both positive and negative. The research questions of this study were concerned with improving the TC accuracy of Iranian EFL learners, specifically if the level of accurate TC usage increases in higher L2 levels while considering explicit and implicit knowledge. The explicit TC knowledge improved steadily and linearly because learners had enough time to think about and use their language knowledge in the assigned task. In comparison, the improvement in the usage of implicit knowledge was not linear, and elementary learners had better results with the correct usage of verb tenses than intermediate learners. This nonlinearity is thought to be due to the presence of explicit TC knowledge. In particular, intermediate learners are in a transitional phase where they try to use their new explicit TC knowledge during real-time language processing. This results in errors in their language production because, to put it simply, their new knowledge makes them want to apply it to the task presented. Thus, this study implies learning explicit TC rules after learners are ready linguistically and cognitively.

2.2.4 Study 4

“Incidental L2 vocabulary learning: Recent developments and implications for future research” by Nathan Thomas.

The fourth study concentrates on implicit vocabulary learning. Although it does not present original research with a hypothesis, participants, and procedure, it critically examines two research studies that contain innovative methods of implicit vocabulary learning. Notably, the author of this study attempts to explore to what extent implicit vocabulary learning is possible and to evaluate its effectiveness. In addition, this study elaborates on the ideas of innovative methods, proposing future research.

Initially, this study provides a theoretical framework to present the possibility and effectiveness of implicit vocabulary learning. In SLA, research has established that it is indeed possible to learn vocabulary implicitly. Nonetheless, when compared to explicit vocabulary learning, the proportion of vocabulary acquired implicitly is relatively low. Furthermore, implicit vocabulary knowledge can be obtained through reading or listening, with reading demonstrating a higher likelihood of vocabulary acquisition than listening. For this reason, the author of the study focuses on examining two research that utilise reading as the primary input for L2 learners.

The first research chose Chinese students as the participants and split them into two groups – experimental and comparison. Both groups got the exact text they were supposed to read. However, the experimental group got a codeswitched text (a text in Chinese with five English words in it), and the comparison group got a grading text (a text entirely in English). The aim was to see if codeswitched reading would support the increase of implicit vocabulary knowledge acquired during reading. There was no teaching instruction, nor were the students presented with the fact that they would be taking an immediate recall test after the reading and a delayed retrieval the week after this reading.

The test results showed that the experimental group did better than the comparison group in both tests. Not only that, but the experimental group had better retention. This indicates that while both types of reading are effective in implicit vocabulary learning, codeswitched reading proves to be more beneficial. This is probably due to the L2 words standing out more visually in texts that are mostly written in the learners' L1, resulting in increased attention to the L2 words. Moreover, the learners need to put more mental effort into codeswitched reading to guess and understand the meanings of the words in L2. Nevertheless, as beneficial as codeswitched reading appeals to implicit vocabulary learning, it is noted that reading is not just about learning new vocabulary but also strengthening other aspects of vocabulary knowledge, such as the usage of the word in the correct context. This means that a text mostly written in L1 does not provide enough L2 context or repeated exposures for these other learning processes to occur, which the learner should have in mind when attempting to learn L2 vocabulary.

The second research focused on forty-two advanced L2 learners exposed to repeated encounters in a text. The method of investigating implicit vocabulary learning involved tracking the eye movements of the learners. The learners were presented with a task to read a graded text that included twenty made-up words as targets and twenty known words as controls. The eye-tracking method showed that participants spent more time on the made-up words than on the known words; however, the time spent on each made-up word decreased with repeated exposure. Tests on vocabulary and comprehension followed, including recognising word forms and meanings and recalling meanings. In the test, form recognition improved the most, followed by meaning recognition and recall. Each time a word was encountered, the chances of recognising its form and meaning and recalling its meaning increased while decreasing the reading time.

Similar findings can be found in other studies; nonetheless, what sets this study apart is that the combined time spent on each word encounter was a more accurate predictor of learning

outcomes than the total number of encounters. This resulted in two new terms to explain this finding: dynamic exposure and static exposure. Dynamic exposure refers to “the sum of all the information that readers have accrued from all encounters with a given word.” In contrast, static exposure is “the number of exposures”, with tracking dynamic exposure being a new approach in incidental vocabulary learning research, as most studies have only focused on static exposure. However, studies on static exposure were essential in advancing the research field to its current state and still provide valuable insights into incidental vocabulary learning.

The essential discovery from this research is that the best conditions for acquiring new vocabulary and understanding the words’ meaning lie in exposure and interaction with vocabulary in rich and quality contexts. The vocabulary acquisition can also happen faster if the context is informative. In conclusion, implicit vocabulary learning was confirmed to be effective. Nonetheless, its effectiveness relies on factors like the number of known words in a text, target word salience, dynamic exposure, etc. Therefore, using both explicit and implicit instruction during vocabulary learning is recommended, as they complement each other. Lastly, this study proposes future research in presented methods for implicit learning – codeswitched texts and dynamic exposure.

2.2.5 Study 5

“Implicit vs Explicit Vocabulary Learning: Which Approach Serves Long-term Recall Better?” by Mostafa Mirzaei.

The learners’ vocabulary range can best observe language achievement, as nothing can be communicated without it. In order to maintain the quality and quantity of the vocabulary, the learner must not only learn them but also remember them. Vocabulary recall is closely connected to the concept of forgetting, which, in the context of vocabulary acquisition, means not being able to transform new vocabulary from short-term storage to long-term memory. It has been a central debate in language acquisition as to why learners forget vocabulary. This resulted in a search for the most suitable way to learn vocabulary, with most related literature proposing either an explicit or implicit approach. Here, the explicit approach focuses attention mainly on vocabulary acquisition in tasks. In contrast, the implicit approach focuses attention on tasks where vocabulary acquisition is a byproduct rather than the primary goal. Furthermore, studies suggest that higher proficiency of an L2 increases the likelihood of implicit vocabulary learning and that explicit

vocabulary learning is most beneficial for lower-level L2 learners. However, the question is which of these approaches is actually better for long-term vocabulary recall.

The participants were all early intermediate EFL learners chosen from an Iranian school. These participants were then split into two groups – one engaged in explicit vocabulary learning and the other in implicit vocabulary learning. Both groups got the same vocabulary items to learn through two different approaches. The first group did activities requiring deep-level cognitive processing, such as matching, sorting, ranking, grouping, etc. On the other hand, the second group was given a collection of authentic reading materials, specifically extensive reading, which they were supposed to read during study sessions. Moreover, to assess the achievements of the groups, both took a pre-test before the study sessions and a post-test after the study session. The tests offer three subtests: meaning, preposition and collocation.

The results indicated significant improvement in both groups. However, the group engaged in explicit vocabulary learning demonstrated superior performance in the meaning and preposition subtests. In contrast, the group involved in implicit vocabulary learning excelled in the collocation subtest. These findings suggest that each learning process offers distinct advantages for different areas of vocabulary acquisition. Explicit learning appears to be more effective for understanding word meanings and prepositions, while implicit learning is more beneficial for mastering collocations. Consequently, these results advocate combining explicit and implicit vocabulary learning approaches to optimise overall vocabulary development.

2.2.6 Study 6

“Incidental development of implicit and explicit grammar knowledge from reading: The case of lower-intermediate learners” by Donald, F. B. Ward and Yuen Yi Lo.

Up to this point, three studies focused on incidental vocabulary development through different reading techniques. This study also centres its attention on reading but with incidental grammar acquisition in mind. Specifically, it aims to discover whether lower-intermediate L2 learners can obtain a grammar rule through implicit reading exposure.

The participants for this research were thirty lower-intermediate L2 Chinese students. These students were divided into two classes – one experimental and one control. The goal was to explore whether implicit learning could help the learners in their usage of the past tense -ed, particularly in speaking and understanding it in real-time, by strengthening their implicit

knowledge of this grammar rule. Both groups took part in six study sessions. The experimental group got reading materials (short stories, news articles, etc.) they were supposed to read during sessions, which contained the investigated grammatical items for approximately every fifteen running words. After that, a discussion with the tutor followed without explicitly focusing on the grammar rule. The control group, on the other hand, engaged in listening and writing tasks. Furthermore, both groups took a pre-test before starting the study sessions and a post-test after finishing them to examine grammar development. The post-test was followed by an exit questionnaire to determine whether the participants noticed the focus of the tests and if they found anything unique about them. Additionally, for the experimental group, the questionnaire included questions about whether they had learned anything new from the reading and if they observed any language-related aspects while reading the texts.

The result showed an improvement in the development of implicit grammar knowledge within the experimental group compared to the control group. There are several reasons for this. For example, the reading materials had a higher rate of target items compared to the tasks the control group engaged in. This means that the experimental group was exposed to input more, fastening the ability to process the target grammar items. Furthermore, since verbs are crucial to understanding a sentence, the experimental group had to process them to understand the texts, resulting in even more exposure to the target items. This exposure likely strengthened both their explicit and implicit knowledge.

This study showed that reading is beneficial for improving L2 learners' implicit grammar knowledge. It demonstrated that reading short texts with repeated exposure to the target structure can help develop implicit knowledge. While the study does not suggest replacing current grammar instruction with reading, it does support the idea of placing more emphasis on reading and extensive reading as a crucial part of the language learning curriculum.

2.2.7 An Overview Table of the Studies

This subchapter presents a comprehensive overview table summarising the studies discussed in the previous subchapters. The table includes the titles of the studies, the names of their authors, and the specific research questions addressed by each study. It also highlights the major findings of each study concerning their respective research questions.

Table 1: An Overview of Studies

Study	Title	Author(s)	Research question(s)	Major findings
1	Effects of context on implicit and explicit knowledge: An event-related potential study.	Sungmook Choi, Jingu Kim and Kwangmin Ryu	How does implicit learning contribute to second language acquisition? What do we learn implicitly in the English language?	Neither contextualised nor decontextualised learning is superior to implicit knowledge development, but both are effective. Vocabulary can be learnt implicitly.
2	Children extract new linguistic rules more quickly than adults.	Sarah Berger and Laura J. Batterink	How does implicit learning contribute to second language acquisition? What do we learn implicitly in the English language?	Support of the critical age concept. Grammar can be learnt implicitly.

3	Implicit/explicit knowledge and its contribution towards tense consistency employment across EFL learners' proficiency levels.	Amir Reza Asiyaban, Mortaza Yamini, Mohammad-Sadegh Bagheri and Lotfollah Yarmohammadi	How does implicit learning contribute to second language acquisition?	Introducing explicit instructions into language learning must be done after the learners are ready.
			What do we learn implicitly in the English language?	Grammar can be learnt implicitly.
4	Incidental L2 vocabulary learning: Recent developments and implications for future research.	Nathan Thomas	How does implicit learning contribute to second language acquisition?	The effectiveness of acquiring implicit knowledge through reading lies in rich and quality contexts.
			What do we learn implicitly in the English language?	Vocabulary can be learnt implicitly.
5	Implicit vs Explicit Vocabulary Learning: Which Approach Serves Long-term Recall Better?	Mostafa Mirzaii	How does implicit learning contribute to second language acquisition?	Implicit learning is the most beneficial in mastering collocations.
			What do we learn implicitly in the English language?	Vocabulary can be learnt implicitly.

6	Incidental development of implicit and explicit grammar knowledge from reading: The case of lower-intermediate learners	Donald, F. B. Ward and Yuen Yi Lo	How does implicit learning contribute to second language acquisition? What do we learn implicitly in the English language?	Reading is beneficial for the development of implicit grammar knowledge. Grammar can be learnt implicitly.
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2.3 Results of the Review

The previous chapter presented six studies selected according to the criteria outlined in chapter 2.1. As shown in the overview table in chapter 2.2.7, these studies collectively addressed both research questions to various degrees and contributed to the implicit learning and knowledge research in SLA. This chapter synthesises these findings into a coherent text.

The first research question is: How does implicit learning contribute to second language acquisition? To specify what this means, it was established that the question aims to explore the impact and mainly effectiveness of implicit L2 learning. In other words, how effective implicit learning is in SLA. Furthermore, it was established that this question can also apply to implicit language knowledge as the cognitive processes of implicit learning and knowledge are the same.

The effectiveness of implicit learning in SLA has been shown to be highly positive. In all the studies, implicit learning helped learners acquire items from different language areas, whether vocabulary or grammar. Study six demonstrated that reading is beneficial for implicit knowledge acquisition; however, some reading methods may be more effective than others. In study one, learners engaged in contextualised and decontextualised reading, and while neither method proved superior for implicit knowledge development, both were effective. Study four adds that for reading to be effective, it must provide rich and quality contexts. Moreover, study five found that implicit learning was particularly effective for mastering collocations.

Furthermore, the second study provides valuable insights into the impact of implicit language learning on the speed of language acquisition. The findings indicate that this impact can be influenced by the age of the learners. Specifically, in this study, children demonstrated an ability to implicitly grasp a grammar rule more quickly than adults. This observation strongly supports the concept of a critical period during which language acquisition occurs more rapidly and effortlessly, without the need for explicit instruction. Although this particular study was conducted with native English speakers, the concept of critical age is one of the central debates in L2 acquisition. Therefore, this study contributes to the ongoing debate by providing empirical evidence of age-related differences in implicit language acquisition.

Moreover, the concept of a critical age is considered one of the limitations of implicit language acquisition. The overall limitation debate was addressed in the theoretical section, where it was concluded that scholars recommend a combination of explicit and implicit learning to achieve high language proficiency. Studies one, four, and five support this conclusion, demonstrating that while implicit learning is effective, explicit learning can further enhance language acquisition. This works in favour of the statement made in the theoretical part that implicit and explicit learning and knowledge are connected and that explicit learning can support implicit learning. These studies indicate that implicit learning contributes to second language acquisition; however, explicit learning strategies must be integrated to achieve higher levels of proficiency and mastery. This combination allows learners to refine and expand their language skills more effectively. Therefore, while implicit learning plays a crucial role in SLA, it is only part of the equation, and explicit learning must be considered to reach advanced levels of language proficiency.

The second research question is: What do we learn implicitly in the English language? Specifically, it examines which language areas can be acquired through implicit learning processes. To address this question, the selection of the studies consisted of research aiming to explore two different language areas - three studies focused on implicit grammar acquisition, while the other three concentrated on vocabulary acquisition. Given the established effectiveness of implicit learning demonstrated in all six studies, it can be concluded that English learners can acquire grammar and vocabulary implicitly. Furthermore, concerning grammar, the studies indicate the potential for acquiring knowledge related to tense consistency and the formation of past verb tenses. These findings suggest that implicit learning mechanisms can play a significant role in the acquisition of these fundamental language areas.

In conclusion, these findings suggest that implicit learning positively contributes to SLA, as this learning process is effective in requiring language. Furthermore, the results support the concept of a critical period and highlight the benefits of combining explicit and implicit learning strategies. The studies specifically focused on the acquisition of grammar and vocabulary, indicating that these two language areas can be acquired through implicit learning processes.

2.3.1 Limitations of the Review

It is important to note that just like any research, this one also has its limitations. The review provided an overview and results of the studies described in the previous subchapters; however, the results might offer only some of the possible answers to the research question. Therefore, this subchapter presents one essential limitation of this review.

A significant limitation of this review is the small number of studies included. Despite the vast amount of research available, the scope of a bachelor thesis restricts the number of studies that can be analysed thoroughly. As a result, the findings presented here might cover only some aspects of implicit learning in English language acquisition. If more studies were examined, the results might have shown, for example, that more language areas can be acquired implicitly.

Additionally, all of the studies reviewed were published in the 2010s, with four of them released in the last four years. However, more recent research, either supporting or contradicting these studies, may exist. It is acknowledged that the omission of certain databases or publication outlets may have inadvertently excluded relevant studies. Therefore, while the conclusions drawn in this review offer valuable insights, they may not fully represent all the evidence in implicit L2 research.

CONCLUSION

This thesis aimed to review research regarding implicit learning in second language acquisition, specifically how implicit learning contributes to SLA of English in terms of impact and effectiveness and what language areas can be learnt implicitly. The thesis consisted of two parts. The first was a theoretical part, while the second was a practical part.

The theoretical section provided a theoretical background for the practical part of the thesis. It began by defining second language acquisition as both a field of research and a process of acquiring a second language, establishing its usage in the thesis. Following this, it reviewed the history of SLA and presented selected perspectives on the subject, as outlined by Douglas H. Brown. Notably, two perspectives—emergentism and implicit and explicit processing—were initially omitted but discussed in more detail in subsequent chapters. First, emergentism was introduced and connected to another SLA theory: connectionism. In the following chapter, the key concepts of emergentism and connectionism were explored in greater detail - implicit and explicit learning. It was concluded that the main difference between these learning types lies in consciousness, attention, and awareness. Implicit learning involves acquiring knowledge without conscious awareness and attention, while explicit learning involves acquiring knowledge with conscious awareness and attention. The final chapter concentrated on the interface between explicit and implicit learning and knowledge.

The practical part was constructed as a traditional review. It first introduced the methodology for conducting the research and finding the studies. Initially, ten studies were found; however, during the writing process, four studies were excluded as they did not meet the predefined criteria – the study either did not focus on English or L2 in any way or did not answer any of the research questions. This resulted in a total of six studies being examined.

The research findings demonstrate that implicit learning positively contributes to SLA, highlighting its efficacy as a learning approach. Nevertheless, despite the positive impact of implicit learning on SLA, most studies recommend using explicit learning to complement implicit learning to acquire high language proficiency. These two learning processes are connected, and their interface can significantly improve L2. Moreover, the research suggests that vocabulary and grammar are language areas that can be acquired implicitly. However, it is essential to acknowledge the limitations inherent in this research review. Despite these limitations, the primary aim of this thesis was successfully achieved, as the studies addressed the research questions.

RESUMÉ

Jazyku je vystaven každý jedinec již od narození. Později v životě je navíc pravděpodobné, že se jedinec setká s druhým, cizím, jazykem, který se bude učit, v rámci školní výuky. Nejčastěji se jedná o anglický jazyk. Otázkou však je, jak si jedinec tento další jazyk osvojuje. Přirozeně tedy existuje věda zabývající se procesem osvojování a učení jazyků. Tato věda se nazývá osvojování jazyka, přičemž jednou z jeho nejvýznamnějších odvětví je osvojování druhého jazyka. Osvojování druhého jazyka zkoumá procesy, prostřednictvím kterých se jednotlivci učí jiný jazyk než svůj mateřský, ať už jde o druhý jazyk nebo jakýkoli další jazyk. V rámci osvojování druhého jazyka existují dvě teorie, které jsou středem zájmu mnoha výzkumníků – explicitní (vědomé) a implicitní (nevědomé) učení.

Tato bakalářská práce se zabývá zkoumáním implicitního učení v rámci osvojování druhého jazyka. Cílem práce je zjistit, jak implicitní učení pomáhá v osvojování anglického jazyka a jakých jeho aspektů se to týká. Tato práce je rozdělená na dvě části. První je teoretická a druhá praktická.

Teoretická část se skládá z pěti kapitol a jedné podkapitoly. První kapitola se věnuje definování osvojování druhého jazyka. Tento termín označuje jak vědu, která se daným procesem zabývá, tak přímo proces jako takový. Zároveň tato kapitola popisuje přístupy různých autorů k používání termínů učení a osvojování. Někteří autoři termíny používají jako synonyma, zatímco jiní je rozlišují – osvojování používají k označení nevědomého procesu a učení k označení vědomého procesu. Tato kapitola je zakončena vysvětlením, že tato práce používá termíny osvojování a učení jako synonyma a termín osvojování druhého jazyka odkazuje na proces, pokud není řečeno jinak.

Druhá kapitola se nejdříve krátce věnuje historii osvojování druhého jazyka jako vědy. Poté se zaměřuje na konkrétní rozdělení teorií osvojování druhého jazyka do dvou perspektiv podle Douglase H. Browna. Tyto teorie jsou povrchově popsány, ovšem dvě jsou vynechány, jelikož jde o klíčová témata této bakalářské práce, tudíž jsou jim věnovány samostatné kapitoly. Jedná se o emergentismus a explicitní a implicitní učení.

Třetí kapitola se věnuje emergentismu, jedné z teorií osvojování druhého jazyka. V angličtině je tato teorie spojena s pojmem „emergent“, což znamená vznikat. Jednoduše řečeno, tato teorie říká, že žáci si přirozeně osvojí druhý jazyk, tudíž jazyk vznikne, pokud jsou mu dostatečně vystaveni a trénují ho. Nicméně tato teorie neposkytuje dostatek detailů o osvojovacím procesu, tudíž se obrací a často čerpá z jiné teorie osvojování druhého jazyka a tou je

konektivismus. Ten se zaměřuje na propojování asociací v mozku, které se tvoří v reakci na opakované vystavení lingvistickým vzorcům, a které mají za následek osvojení jazyka. Zároveň tato teorie říká, že tyto asociace zesílí při dostatečném vystavení danému jazykovému prostředí. Konektivisté si kladou za cíl vysvětlit vznik těchto asociací a následně se zabývají jejich spojitostí s osvojováním druhého jazyka. Zároveň se konektivismus snaží, aby osvojení druhého jazyka fungovalo jako přechod ze záměrného úsilí na automatické používání, což souvisí s explicitním a implicitním učením.

Čtvrtá kapitola se věnuje explicitnímu a implicitnímu učení jazyka. Definice explicitního učení se mezi výzkumníky moc neliší. Jedná se o učení, kdy se žák vědomě pokouší naučit nové informace nebo vyřešit nějaký úkol. Explicitní učení lze nejčastěji spatřit ve školní výuce, protože žáci čekají, že jejich nové znalosti budou otestovány, tudíž se vědomě snaží naučit novou látku. Naproti tomu implicitní učení je mnohem komplexnější. Obecně se však definuje jako nevědomé učení, při které si žák není vědom toho, že probíhá osvojovací proces a že získal nové znalosti, které pak ale umí použít. Nevědomé učení tedy probíhá bez záměru se naučit něco nového.

Implicitní učení je nejčastěji spojováno s osvojováním prvního, tedy mateřského, jazyka, jelikož bylo již mnohokrát dokázáno, že děti se dokážou svůj mateřský jazyk naučit čistě implicitně. Otázkou ve výzkumu osvojování druhého jazyka tedy je, zda si i druhý jazyk lze osvojit implicitně. Obecný závěr je takový, že to možné je, ovšem implicitní učení druhého jazyka má své limity (například hypotéza kritického období, o které pojednává podkapitola této kapitoly), proto je doporučeno podporovat implicitní učení explicitním učením, jelikož jsou tyto procesy propojeny, a mohou zajistit dosažení vysoké jazykové úrovně.

Právě propojení explicitního a implicitního učení a znalostí, je tématem páté kapitoly. Explicitní znalost je definovaná jako znalost o jazyku, konkrétně jeho pravidlech. Implicitní znalost je o něco složitější, jelikož někteří autoři říkají, že pokud je žák schopen nějakou ze svých znalostí použít, musí si ji být nějakým způsobem vědom, tudíž není možné, aby byla spojena s nevědomostí. Nicméně jednoduše je implicitní znalost definována jako znalost používána spontánně a automaticky. Hlavní propojení těchto dvou procesů spočívá v tom, jak explicitní učení a znalosti ovlivňují implicitní učení a znalosti. Přesněji řečeno, explicitní učení a instrukce mohou pomoci v urychlení implicitního učení. Zároveň také explicitní učení může zvýšit úroveň jazyka, který byl osvojen implicitně. Spojitost mezi těmito dvěma procesy je tedy nezpochybnitelná.

V praktické části této práce bylo cílem sestavit přehledovou studii, která by odpověděla na předem stanovené výzkumné otázky. Tato část se skládala ze tří kapitol. Nejdříve byla popsána

metodika studie dle Jiřího Mareše a jeho článku „Přehledové studie: jejich typologie, funkce a způsob vytváření.“ V této části byly také představeny dvě výzkumné otázky. První se ptá, jak implicitní učení přispívá k osvojování druhého jazyka, respektive jak efektivní je implicitní učení při osvojování druhého jazyka. Druhá otázka se ptá, co se můžeme v rámci anglického jazyka naučit implicitně.

Poté bylo v další kapitole představeno a popsáno šest studií, které splňovaly požadavky pro zařazení do přehledové studie. Následovala přehledná tabulka studií, která zahrnovala název studie, její autory, na jakou výzkumnou otázku odpověděla, a jaké byly hlavní nálezy pro vědecké pole osvojování druhého jazyka. Všechny studie dokázaly odpovědět na obě výzkumné otázky.

Poslední kapitola se věnovala shrnutí poznatků, které ze studií vzešly. Výsledky ukázali, že implicitní učení pozitivně přispívá k osvojování druhého jazyka, jelikož jde o efektivní a účinnou učicí metodu. Navzdory tomuto poznatku, přesto je většinou studií doporučováno kombinovat implicitní i explicitní učení při osvojování druhého jazyka, což se shoduje s tvrzením v teoretické části, které říká, že explicitní učení je důležité k podpoře implicitního učení. Výsledky také ukázali, že implicitně se lze v anglickém jazyce si lze osvojit gramatiku a slovní zásobu. Součástí této kapitoly je podkapitola, která se věnovala limitům této přehledové studie, například nedostatečné množství nalezených studií. Poslední částí této práce byl závěr, který nejen shrnoval celou práci, ale také zhodnotil, zda byl cíl práce splněn.

BIBLIOGRAPHY

- Brown, Douglas H. 2014. *Principles of Language Teaching and Learning*. 6th ed. London: Pearson Education.
- Dixon, Suzanne D, Martin T. Stein. 2006. *Encounters with Children: Pediatric Behavior and Development*. 4th ed. Missouri: Mosby.
- Dörnyei, Zoltán. 2009. *The Psychology of Second Language Acquisition*. New York: Oxford University Press.
- Ellis C., Nick. 1998. “Emergentism, Connectionism and Language Learning.” *Language Learning* 48(4): 631 – 664.
- Ellis C., Nick 2003. “Constructions, chunking and connectionism: the emergence of second language structure” In *The Handbook of Second Language Acquisition*, edited by Catherine J. Doughty and Michael H. Long, 63 – 103. New Jersey: Blackwell Publishing.
- Ellis C., Nick. 2005. “At the Interface: Dynamic Interactions of Explicit and Implicit Language Knowledge.” *Studies in Second Language Acquisition* 27(2): 305–352. Cambridge: Cambridge University Press.
- Ellis C., Nick. 2008. “Implicit and Explicit Knowledge about Language” In *Encyclopedia of Language and Education*, edited by Nancy H. Hornberger, 1878-1890. New York: Springer Publishing.
- Ellis C., Nick. 2015. “Implicit and explicit language learning: Their dynamic interface and complexity.” In *Implicit and Explicit Learning of Languages*, edited by Patrick Rebuschat, 3–23. Amsterdam: John Benjamins Publishing Company.
- Ellis, Rod. 1997. *Second Language Acquisition*. Oxford: Oxford University Press.
- Ellis, Rod. 2005. “Measuring Implicit and Explicit Knowledge of a Second Language: A Psychometric Study.” *Studies in Language Acquisition* 27(2): 141 – 172. Cambridge: Cambridge University Press.
- Ellis, Rod. 2015. *Understanding Second Language Acquisition*. Oxford: Oxford University Press.
- Ellis, Rod. 2021. “A short history of SLA: Where have we come from and where are we going?” *Language Teaching* 54(2): 190–205.

- Esteki, Bahareh. 2014. "The Relationship between Implicit and Explicit Knowledge and Second Language Proficiency" *Theory and Practice in Language Studies* 4(7): 1520–1525.
- Hulstijn H., Jan. 2013. "Incidental Learning in Second Language Acquisition" *The Encyclopedia of Applied Linguistics* 5: 2632 – 2640. New Jersey: Wiley-Blackwell.
- Hummel, Kirsten. 2014. *Introducing Second Language Acquisition: Perspectives and Practises*. New Jersey: Wiley-Blackwell.
- Koda, Keiko. 2007. "Reading and language learning: Crosslinguistic constraints on second language reading development" *Language Learning* 57: 1 – 44.
- Krashen, Stephen D. 1981. *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon Press.
- Krashen, Stephen D. 1982. *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon Press.
- Leow P. Ronald and Celia C. Zamora. 2017. "Intentional and Incidental L2 learning." In *The Routledge Handbook of Instructed Second Language Acquisition*, edited by Shawn Loewen and Masatoshi Sato, 33-49. New York: Routledge.
- Li, Juan. 2019. "A Systematic Review of Video Games for Second Language Acquisition." In *Handbook of Research on Integrating Digital Technology With Literacy Pedagogies*, edited by Pamela M. Sullivan, Jessica L. Lantz, and Brian. A. Sullivan, 472–499. Hershey: IGI Global.
- Mareš, Jiří. 2013. "Reviews: Their Typology, Functions and How to Write Them." *Pedagogická orientace* 23(4): 427-454.
- Menezes, Vera. 2013. "Second Language Acquisition: Reconciling Theories." *Open Journal of Applied Science*. 3(7): 404–412.
- Myles, Florence. 2010. "The development of theories of second language acquisition." *Language teaching* 43(3): 320–332.
- Ortega, Lourdes. 2013. *Understanding Second Language Acquisition*. New York: Routledge.
- Rebuschat, Patrick. 2015. "Introduction: Implicit and explicit learning of languages." In *Implicit and Explicit Learning of Languages*, edited by Patrick Rebuschat. XIII-XXII. Amsterdam: John Benjamins Publishing Company.

Ridley, Diana. 2012. *The Literature Review – A Step-by-Step Guide for Students*. 2nd ed. London: Sage.

Saville-Troike, Muriel. 2012. *Introducing Second Language Acquisition*. 2nd ed. Cambridge: Cambridge University Press.

Shirai, Yasuhiro. 2019. *Connectionism and Second Language Acquisition*. New York: Routledge.

Williams, John N. 2005. "Learning Without Awareness." *Studies in Second Language Acquisition* 27(2): 269–304. Cambridge: Cambridge University Press.

Studies:

Asiyaban, Amir Reza, Mortaza Yamini, Mohammad-Sadegh Bagheri and Lotfollah Yarmohammadi. 2020. "Implicit/explicit knowledge and its contribution towards tense consistency employment across EFL learners' proficiency levels." *Cogent Education* 7: 1 – 15. (STUDY 3)

Berger, Sarah and Laura J. Batterink. 2024. "Children extract a new linguistic rule more quickly than adults" *Developmental Science* 27(4): 1 – 18. (STUDY 2)

Choi, Sungmook, Jingu Jim and Kwangmin Ryu. 2014. "Effects of context on implicit and explicit lexical knowledge: An event-related potential study." *Neuropsychologia* 63: 226 – 234. (STUDY 1)

Mirzaii, Mostafa. 2012. "Implicit Vs. Explicit Vocabulary Learning: Which Approach Serves Long-term Recall Better?" *The Southeast Asian Journal of English Language Studies* 18(1): 1 – 12. (STUDY 5)

Thomas, Nathan. 2020. "Incidental L2 vocabulary learning: Recent developments and implications for future research." *Reading in a Foreign Language* 32(1): 49 – 60. (STUDY 4)

Ward F.B., Donald and Yuen Yi Lo. 2023. "Incidental development of implicit and explicit grammar knowledge from reading: The case of lower-intermediate learners of English." *System* 116: 1 – 10. (STUDY 6)