Investigating the effectiveness of Involvement Load Hypothesis in vocabulary learning in the Slovak EFL context

Ivana Sláviková
i.slavikova01@gmail.com

Kľúčové slová: hypotéza Involvement Load, involment load, výučba slovnej zásoby, aktivity na slovnú zásobu, efektívnosť aktivít na vyučovanie slovnej zásoby
Key words: Involvement Load Hypothesis, vocabulary learning, vocabulary activities, effectiveness of vocabulary activities, involvement load

Abstract

This study evaluates the effectiveness of vocabulary learning materials using the Involvement Load Hypothesis (Laufer – Hulstijn, 2001a) among 45 Slovak university English as a foreign language learners. It is one of the first research into vocabulary activities in Slovakia. An experimental study between three groups of 15 learners was conducted. Learners completed tasks with different involvement loads and unannounced immediate post-test, which tested meaning recall. The findings partially supported the Involvement Load Hypothesis. Students who had carried out the task with the highest involvement load were found to recall significantly more meanings than students who completed the task with the lowest involvement load. However, the vocabulary gains of the learners who finished the task with a moderate involvement load were not significantly different from other groups. Overall, the Involvement Load Hypothesis was partially supported, and it can be concluded that Slovak learners can benefit from a higher involvement load in the vocabulary tasks. This study provides valuable insight into the effectiveness of vocabulary learning materials in the Slovak EFL context, and teachers and learners can highly benefit from it.

1 Introduction

The study aims to determine if the Involvement Load Hypothesis (ILH) (Laufer – Hulstijn, 2001a) leads to higher vocabulary meaning recall in incidental vocabulary learning among Slovak EFL university students.

Vocabulary plays a central role in language learning (Schmitt and Schmitt, 2020). The philosopher Wittgenstein said: “The limits of my language are the limits of my words” (1922). Accordingly, without sufficient vocabulary, it becomes challenging to achieve a higher level of language proficiency (Zimmerman, 1997). Thus, researchers have been focusing more on vocabulary (Webb – Nation, 2017) and on a framework that can be followed while constructing or evaluating vocabulary tasks (Laufer, 2020). One of the first frameworks was the Involvement Load Hypothesis (Laufer – Hulstijn 2001a) which has been validated in many EFL contexts such as Chinese, Dutch, Israeli or Turkish. However, it has not been validated in the Slovak EFL context. Therefore, the importance of vocabulary acquisition provided the impetus for the decision to research the effectiveness of the Involvement Load Hypothesis.

English and its vocabulary are essential in the Slovak EFL context, where English has become a compulsory language in primary and secondary schools, as prescribed by the Slovak Ministry of Education. Moreover, the Slovak Ministry of Education (2018) reports that in 2018, more than 83 % of secondary school students chose English as one of their four final exams

that have to be taken to graduate from secondary school. Because English is an international language and the most spoken language as a foreign language, nowadays, to find a decent job, at least an intermediate level of English language proficiency is required (Belanová, 2019). Moreover, 87 % of Slovak people consider English beneficial for children's future life and career (Eurobarometer, 2012). Slovak learners also have many possibilities to travel and study abroad, therefore, many students are highly motivated to learn English (Granska, 2016). Thus, English plays a vital role among Slovak people, and its learning has many benefits.

Despite this endeavour to teach English, reflecting on my own experience of learning English in Slovakia, vocabulary teaching and learning in Slovak schools is not efficient enough. Moreover, Slovak learners still find it challenging to use English in their everyday life (Lojova, 2016). International education company Education First, which conducts a survey focusing on English proficiency every year, revealed that Slovakia takes 22nd place out of 100 countries worldwide (EF Education First, 2020). Even though this place indicates comparatively high proficiency in English, Slovakia is still one of the less proficient countries among European countries with its 20th place out of 34 European countries.

Even though English is considered highly important for Slovak learners and EFL teaching methods seem ineffective, little research has been done on vocabulary. That is why it is crucial to conduct a study focusing on the effectiveness of vocabulary activities used in Slovakia.

The research was conducted by an experiment that involved 45 university students divided into three groups that completed a vocabulary learning task with various involvement loads and immediate unannounced vocabulary post-test focusing on meaning recall. Sequentially, these groups were compared, and it was found that a higher involvement load of the vocabulary task leads to higher vocabulary meaning recall among Slovak university students.

2 Literature review

2.1 Incidental and intentional vocabulary learning

English vocabulary can be learned in two ways: intentionally and incidentally (Zimmerman, 2014). Intentional learning is when the learner's focus is on the words themselves with the intention to memorize them (Schmitt, 2008). For example, using word cards is one of the strategies for intentional learning. Some aspects of word knowledge, such as meaning or register, are best learned intentionally (Nation, 2013).

On the other hand, in incidental learning, new words are acquired while focusing on the task or the message rather than deliberately trying to learn new words, for example, when the learners read a novel (Schmitt, 2010). Learning in this way requires learners to guess the meanings of the words from the context to understand the overall message (Nation, 2013). Therefore, incidental learning is beneficial for vocabulary learning, especially in long-term retention (Hulstijn – Laufer, 2001b). Moreover, it helps learners develop their fluency and increases their motivation for learning (Brown, 2000).

Incidental and intentional vocabulary learning needs to be considered while designing vocabulary tasks. Therefore, the tasks should be designed carefully to encourage learners to explicitly notice the target forms (Truscott, 1998) and allow opportunities for practice and retrieval (Williams, 2012).

2.2 Vocabulary task efficacy

Vocabulary activities play a central role in vocabulary acquisition, and the way they are designed is crucial for effective learning (Laufer, 2020). Learners of English as a foreign language need efficient activities to maximize their vocabulary gains (Folse, 2004). However,

although it is a critical part of vocabulary learning, many activities do not provide enough opportunities to engage with the words to be learned effectively.

Most vocabulary is acquired incidentally in the tasks in which learners focus on the content or overall message rather than on deliberate memorizing the unknown words (Nation, 2013). This way also represents the acquisition of L1 and authentic use of the language. Since vocabulary learning activities are crucial in vocabulary acquisition, there was a need for a taxonomy that teachers could easily use to develop their vocabulary materials effectively (Laufer – Hulstijn, 2001a).

Because there is much valuable empirical research in SLA and many ways to design a vocabulary activity, it is challenging to decide the most effective approach. Thus, several frameworks to evaluate vocabulary learning efficacy were proposed based on SLA research, i.e., Involvement Load Hypothesis: ILH (Laufer – Hulstijn, 2001a), Type of Processing – Resource Allocation model: TOPRA (Barcroft, 2002), and Technique Features Analysis: TFA (Nation – Webb, 2011).

TOPRA model is related to the different kinds of initial vocabulary processing that affect what aspect of vocabulary knowledge is learned, i.e., form or meaning. (Barcroft, 2002). It was created because of the limitations of the Depth and Levels of Processing Hypothesis (Craik and Tulving, 1975) that deeper processing does not assure learning all the aspects of word knowledge. Barcroft (2002) claimed that if more attention is put on the meaning of the words, there is less attention on their form. There are different types of processing, e.g., semantic processing affects learning semantic aspects of words, and form processing affects learning the formal properties of the word (Laufer, 2020). However, the human brain is limited, and while processing of the semantic features increases, form processing decreases (Barcroft, 2002). On the other hand, Laufer (2020) points out that knowledge of form and meaning cannot be separated since there is always a meaning-form link.

TFA model was created as a more complex framework to evaluate the effectiveness of vocabulary learning activities (Webb and Nation, 2017). It includes 18 questions divided into five categories: motivation, noticing, retrieval, generation, and retention. These questions can be answered either yes or no, depending on the presence of the feature. Motivation includes specific learning goals and how target words were chosen to learn. Motivational features contribute to vocabulary learning and make language learning, in general, more effective (Dörnyei, 2014). Noticing concerns paying attention to the target words. Negotiation is also an essential part of noticing because it requires paying deliberate attention to word features and enhancing learning (Nunan, 2010). Retrieval deals with opportunities to retrieve new words. This can be done by receptive retrieval (word meaning) or productive retrieval (word form), which can be considered a recall when a learner has to recall the form from their memory. This category also includes how many retrievals are required in the material and if they are repetitive. The generation category is related to the opportunities to produce new words in a given or original context (involves using other words). Retention is the ability to recall new words from long-term memory (Nation, 2001). It can be recalling and recognizing word meaning out of its form or recalling and recognizing word form out of its meaning. Other features involved in retention are instantiation, which is related to images and visualization of word meaning, and interference, which is caused by teaching and learning semantically similar words.

Both frameworks can benefit teachers, learners, and textbook creators in designing vocabulary learning activities. However, one of the first frameworks for evaluating vocabulary activities was the Involvement Load Hypothesis proposed by Laufer and Hulstijn (2001a), and it is the most validated framework (Nation and Webb, 2011). Therefore, this study focuses on the Involvement Load Hypothesis.

2.3 Involvement Load Hypothesis (ILH)

Based on the previous findings and research dealing with concepts such as incidental vocabulary learning and information processing, elaboration, attention, and noticing, the ILH model was created. The concept of the ILH says that when learners are more involved in the activities to learn vocabulary, they will acquire new words more effectively (Nassaji – Hu, 2012). How involving the activity is depends on its score of the *involvement load* (Laufer – Hulstijn, 2001a). Three main elements included in *involvement load* are ***need***, ***search***, and ***evaluation*** (see table 1).

Element	Score	Explanation
Need	0	The learner does not need to learn the word.
	1	The teacher decides if the learner needs to learn the word.
	2	The learner decides to learn the word.
Search	0	The learner does not need to find meaning or the form.
	1	The learner finds the meaning.
	2	The learner finds the form.
Evaluation	0	The learner does not need to decide what word to choose.
	1	The learner chooses the appropriate meaning for the context given.
	2	The learner chooses the meaning and provides context.

Table 1 Involvement Load Hypothesis Model

This framework can be very beneficial for teachers and learners in designing activities for their vocabulary teaching and learning. These activities can be evaluated by giving each element of involvement load score. Each element can be evaluated on a scale from 0 to 2. If the score is zero, the task does not include this element. If the element is present in the activity, it can be considered either *moderate* (score 1) or *strong* (score 2). Accordingly, the activity can be evaluated with an overall score of 6, which means that it is highly involving, thus, more effective for the learners (Hulstijn – Laufer, 2001b).

Need is the element of involvement load that represents motivational factors influencing vocabulary learning. Even though it is essential to consider how new words are processed, the effectiveness of vocabulary acquisition also depends on emotions and motives to learn (Laufer – Hulstijn, 2001a). Motivation can be generally defined as "an abstract, hypothetical concept used to explain why people think and behave as they do" (Dörnyei, 2001, p.1). There has been much research in second language acquisition about motivation, and many researchers have tried to identify many types of motivations included in second language learning (Ellis, 2015). All types of motivation are crucial, as Dörnyei (2014) points out by claiming that success in second language learning highly depends on learners' emotions and motivations.

Similarly, Gardner (1985) considers motivation a crucial factor affecting success in second language learning. Laufer and Hulstijn (2001a) also agree that vocabulary acquisition is considerably easier if there is some degree of motivation. Their concept of *need* is closely linked to motivation to achieve something, which means understanding and learning new vocabulary. However, the ILH draws a distinction between whether learners decide to learn new words by themselves or if they were asked to do so by someone or something else. According to this distinction, the ILH model provides two degrees of *need.* For example, if learners are required to do the task with the unfamiliar words included by the teachers, textbook, or another source, it means that the learners have not decided that they need to understand this word. That is why the *need* is considered *moderate* with a score of 1. In incidental learning, learners do not deliberately memorize words (Zimmerman, 2014), and that is why they do not

have to be explicitly told to learn them. Instead, they might need these words to, for example, finish the tasks. Deci and Ryan (1985) defined the motivation driven by external factors such as teachers or institutions as extrinsic motivation. Skehan (1989) claims that exciting materials and activities can lead to a higher motivation to complete the task, thus, in this case, learning new vocabulary. *Need* can also be considered *strong* when learners decide by themselves to acquire new information. For example, they might come across a new word they do not know, and they wish to learn it because it is necessary to understand the context or carry on with the conversation. This type of *need* is similar to the concept of intrinsic motivation coming from the learners themselves. Intrinsic motivation means that learners can become motivated by their will to improve themselves, make some progress, or simply enjoy doing something (Deci – Ryan, 1985). Creating classroom situations and activities that are engaging and interesting enough for the learners can enhance intrinsic motivation (Skehan, 1989). Consequently, being intrinsically motivated can lead to better learning than being motivated by some external factors (Harmer, 2015). Moreover, Nakata and Webb (2016) claim that if learners have a chance to select the words by themselves, learning can become more motivating, which results in better acquisition. Therefore, if a vocabulary task is designed carefully and is interesting enough to make learners decide they want to learn new words, it can be highly effective in terms of its *need*.

Search is a cognitive element included in the involvement load of the task. It can be explained as the effort learners have to make to find the form or meaning of unfamiliar words. It is crucial for information processing and storing. Cognitive processes are crucial for second language acquisition, and applying cognitive strategies to learn vocabulary can positively affect learning (Ellis, 2015). For example, transferring from L1 to L2 and making associations with the existing knowledge is applied by many successful learners (Oxford, 2011). If the meaning of unfamiliar words is provided in the task, learners do not have to make any effort to look them up, therefore, the task does not include any *search* element. If meanings of target words are not provided, *search* is included. Searching includes using a dictionary or any other source, such as a teacher, a textbook, or classmates. However, it is essential to differentiate if the meaning of a word needs to be searched or its form.

Similarly, the ILH differentiates two degrees of *search*. It is *moderate* when the form of the word is provided, and the learners are required to find the unknown word's meaning. Learners can look for the equivalent in their native language, synonyms, or explanations in the target language. On the other hand, if the meaning of a word is provided either in a native or target language, and learners are expected to find its form, it is considered more effective for learning, thus, the *search* is strong (Laufer – Hulstijn, 2001a).

There is also support for the importance of *search* from SLA literature. *Search* is related to translation language learning strategies, i.e., transferring the words from the native to the target language and vice versa. Fraser (1999) reports that using a dictionary or any other source to look for the meanings and forms of words can lead to a higher meaning recall. Also, Folse (2004), in his Vocabulary Myths, talks about how beneficial translation is for vocabulary learning. O'Malley and Chamot (1990) emphasized using resources to enhance learning in their categorization of cognitive strategies. Mainly, dictionaries were beneficial for second language learning (Knight, 1994; Schmitt, 2000). Including *search* elements while designing vocabulary tasks can increase the involvement load of the task and make learning more successful.

Another cognitive element important for learning vocabulary is *evaluation.* It is linked to comparing and evaluating different meanings according to their actual usage in the context. Using words in original sentences in either spoken or written form can improve learning, and the words can be memorized easier and more effectively (Schmitt, 2008). When the task is

designed so that learners are not expected to use target words in the context or associate them with other words, it does not include the element of evaluation. If learners are required to do so, similarly to *need* and *search*, there are two degrees of *evaluation* in the task. It can be considered moderate when the task contains some context, and the learners are expected to compare the meanings of new words and use them in this context. A prevalent activity to use the words in the context is fill in the blanks vocabulary activity (Laufer – Hulstijn, 2001a). *Evaluation* can also be strong when the task requires learners to compare and choose from various meanings and provide their context, for example, use it in an original sentence while talking to others. In the task with a strong *evaluation*, learners can be asked to compare different words or multiple meanings of the same word/form and recognize their contextual meaning. *Evaluation* is linked to other aspects of SLA.

Evaluation is related to elaboration, i.e., association with already existing knowledge and words the learners have already learned (Ellis, 2015). Applying elaborative strategies can lead to better vocabulary retention and successful language learning (Nyikos – Fan, 2007). This element of the involvement load also provides an opportunity to practice new words in the form of meaning recall. Moreover, it is highly recommended to provide enough opportunities to contextualize new words, thus combining them with words learners already know and producing spoken or written sentences or longer utterances (Joe, 1998). Careful planning of activities that provide enough opportunities to use target items in the context is crucial for the effectiveness of the activities (Laufer – Hulstijn, 2001a).

The Involvement Load Hypothesis framework for effective vocabulary tasks makes adapting and designing materials more accessible for teachers and researchers. In other words, teachers who prepare their vocabulary activities or decide to adapt the existing tasks can combine various degrees of each element of the involvement load and make their learners more involved in the task. For example, Laufer and Hulstijn (2001a, p.18) illustrate reading and writing tasks and how they can be developed to have a higher involvement load (see table 2).

	Task	Target Words	Need	Search	Evaluation	**Total**
1.	Reading task with comprehension questions	Glossed in the text but irrelevant to the task	0	0	0	**0**
2.	Reading task with comprehension questions	Glossed in text and relevant to the task	1	0	0	**1**
3.	Reading task with comprehension questions	Not glossed but relevant to the task	1	1	1	**3**
4.	Reading tasks with comprehension questions and filling the gaps	Relevant to reading comprehension. Listed with glosses at the end of the text	1	0	1	**2**
5.	Writing original sentences	Listed with glosses	1	0	2	**3**
6.	Writing a composition	Concepts selected by the teacher and provided in L1, but the learner must	1	1	2	**4**

		look up the L2 form				
7.	Writing a composition	Concepts selected and looked up by the learner	2	1	2	**5**

Table 2 Examples of activities with their involvement loads

Several validation studies of the ILH have been conducted. Laufer and Hulstijn (2001b) conducted experimental research between groups among EFL learners to validate it. They conducted two studies simultaneously, one with 87 Dutch and one with 99 Israeli EFL learners. They designed three activities with different involvement loads and divided students into three groups. Each task contained ten low-frequency words as target items. The first group finished the reading task with some comprehension questions and glossed words. Its involvement load was 1 with moderate *need* and no *search* or *evaluation*. The second task also involved reading comprehension with glossed words, however, fill in the blanks activity was added. Thus, its load was 2 with moderate *need*, no *search*, and moderate *evaluation*. In the third group, participants were asked to write a text and use the glossed words. Therefore, it contained moderate *need*, no *search*, and strong *evaluation* and scored 3. After completing the tasks, they were given a list of all target items and asked to provide the meaning, i.e., meaning recall. They used the same test after one week in Netherlands and two weeks in Israel. Tests were not announced in advance because of the incidental learning setting. Their hypothesis that tasks with higher involvement load will lead to more vocabulary was validated, and they showed the effectiveness of the Involvement Load Hypothesis.

Other validations studies that tried to replicate Laufer and Hulstijn's (2001b) study were conducted to determine if the ILH can be effective in different contexts. For instance, Eckerth and Tavakoli (2012) compared the initial processing of words with reading only to processing the words again after reading and found that words processed more were learned better. Consequently, higher involvement in the vocabulary tasks led to higher vocabulary learning. The findings of Sarbazi's (2014) experiment among Turkish EFL learners also proved that vocabulary learning is more effective when the involvement load of the task is higher. These findings are similar to the study of Huang (2018), who conducted research with Chinese adult learners and revealed that a higher involvement load leads to higher initial learning. Another research among Chinese EFL learners was done by Tang and Treffers-Daller (2016). However, this research compared vocabulary activities with the same involvement load. The results revealed that vocabulary tasks with the same involvement loads led to relatively same vocabulary gains. Similar results were found in Kim's (2008) research in which the ILH was tested among ESL learners in the USA. Tasks with the same involvement load were compared in terms of initial vocabulary learning and long-term vocabulary retention. These tasks led to similar vocabulary gain thus, the findings fully supported the ILH. Another research in which tasks with the same involvement load were compared was done by Laufer (2003) after Hulstijn and Laufer (2001) suggested that their study did not consider that elements might have different effects on vocabulary acqusition. To test if the elements could have different impacts on learning, activities with same involvement load were used but the score of each component varied. The results showed that the performance of each group was significantly different. Laufer (2003) then concluded that different degrees of components of the involvement load (especially evaluation) might contribute to learning more that the overall degree of the involvement load in vocabulary task. Furthermore, study of Huang, Willson and Eslami (2012) with the focus on comparison of output tasks to input tasks also supported the ILH. They

examined 12 empirical ILH studies and their results showed that output tasks (writing) with higher involvement load than input tasks (reading) with lower involvement load led to better vocabulary learning.

On the other hand, some validation studies did not support the effectiveness of the involvement load in vocabulary tasks. For example, research by Li (2014) conducted among Chinese learners showed that the involvement load hypothesis does not lead to better vocabulary learning. Similarly, the results of Martínez-Fernández (2008) were not in line with the ILH. In addition, Bao (2015) concluded that involvement load does not lead to higher vocabulary learning. Overall, the findings of studies conducted in various contexts differ.

Due to the inconsistency of the studies' findings in different contexts, they cannot be applied to the Slovak population. Furthermore, no research investigating the effectiveness of the Involvement Load Hypothesis was conducted among Slovak EFL learners. Since English is widespread and beneficial for Slovak learners, more research about vocabulary teaching methods is needed in Slovakia. Thus, this study focuses on the ILH among Slovak EFL learners.

2.4 This study

This research focuses on the aim formulated according to the arguments and research presented earlier. As shown in the literature review, teachers and learners in Slovakia could highly benefit from the research that shows if a higher involvement load of the vocabulary activity leads to better learning or not. Therefore, the main aim of this research is to experiment with increasing the involvement load of the task to reveal if it can lead to higher vocabulary meaning recall in the Slovak EFL context. Punch and Oancea (2014) point out that it is helpful to formulate research questions before collecting the data. Such questions can guide us throughout the research and help us decide what type of data are needed and how they will be collected and analysed (Sunderland, 2020). Therefore, a research question was formulated carefully to be clear and researchable (Manson, 2002), and it includes the aim of the study (Cohen – Manion – Morrison, 2018). Throughout this research, there is a focus on the research question stated below:

Does a vocabulary task with higher involvement load lead to more vocabulary learning (meaning recall) among Slovak EFL university learners?

3 Methodology

To investigate the potential efficacy of vocabulary activities and consider the usefulness of the ILH in the Slovak context, an experimental study between three groups of Slovak EFL university students was conducted.

54 Slovak EFL university learners agreed to take part in the experimental part of this study, however, five of them did not complete the task, and another four did not complete the immediate post-test. Consequently, data from 45 students (N = 45; F = 30; M = 15) were used. In order to ensure internal validity and not invalidate the findings of this research (Seliger – Shohany, 2001), participants from 11 different universities in Slovakia studying 32 different majors were selected. The level of English proficiency of the participants was intermediate/upper-intermediate. When dividing learners into groups, the strategy of stratified sampling was used, i.e., participants were separated according to their gender and then randomly divided into three groups of 15 people.

After considering the research purpose, aim, and practicality (Wilkinson – Birmingham, 2003), the ideal way to determine the cause-effect relationship was to complete the tasks with different involvement loads (Dörnyei, 2007). Some researchers have also applied such a design investigating the involvement load hypothesis in various contexts (Folse, 2006; Kim, 2008; Hu

– Nassaji, 2015). Therefore, this study employed a between-group design with the involvement load of learning materials varying among the three groups. The experimental design typically requires the control group, which serves as a base, and experimental groups exposed to some special treatment (McNeill – Chapman, 2005). Treatment is a "controlled and intentional experience specially constructed for the experiment" (Seliger – Shohany, 2001). The instruments of both parts were piloted to maximize the reliability of both the instruments and the results.

Ten non-words were chosen for this experiment. Hulstijn and Laufer's (2001b) experimental study contained ten low-frequency words as target items. In order to make sure that the participants learned a word during the task, the authors asked them to indicate which words they had known before completing the task. The results showed that some of their participants already knew some target words, thus, the data could not be used. Since the participants of this research were at the intermediate or higher level of language proficiency and were students of various majors and backgrounds, they might already have some prior knowledge of even advanced vocabulary. Therefore, non-words were used as target items. Ten words were chosen from the list of non-words generated for a yes/no vocabulary size test proposed by Meara (1994) (see table 3). Words were selected according to their word class, i.e., three nouns, three verbs and four adjectives.

	Target word	Word class	L2 synonym	L1 translation
1.	abrogative	adjective	perfect	dokonalý
2.	custony	noun	desk	pracovný stôl
3.	entrave	verb	contact	kontaktovať
4.	fluctual	adjective	amazing	úžasný
5.	lannery	noun	snorkelling	šnorchlovanie
6.	mundy	adjective	tired	unavený
7.	oligation	noun	search engine	vyhľadávač
8.	regrain	verb	send	poslať
9.	rudge	verb	protect	chrániť
10.	sapirical	adjective	surprised	prekvapený

Table 3 Target words

Materials were designed specifically for each group. Potentially confounding factors such as language proficiency were controlled since they might negatively impact the results, as Bryman (2016) and Larsen-Freeman and Long (1991) suggested. Consequently, the reading material used in this study was 327 words long, and it was accessed from Cambridge assessment preliminary preparation, which is used as a placement test for intermediate level. Reading text was analysed using the software lextutor.com to obtain a detailed vocabulary profile. It had 136-word families. Regarding the frequency profile, 85,12 % of the word families were K1 words, i.e., 1000 most frequent words. K2 was represented by 6,55 % of the word families and K3 by 2,08 %. The rest of the words were proper nouns (e.g., England, UK) or non-words (e.g., lannery). The topic of the text was about new life affected by a new job. The meaning of target words was produced and adapted according to the content of the reading material, and words were highlighted in the text to encourage noticing (Schmidt, 1990) and listed in the glossary below the text. Target words in the worksheets were in alphabetical order in the same way as in the dictionary.

Group IL1 (involvement load 1) served as a control group and was asked to read the text that included all target items and answer six comprehension questions (Sláviková, 2021a).

Questions were designed in a way that students were not required to use target words in their answers. Words were chosen and translated by the researcher, therefore, the *need* is moderate with the score of 1, and there is no *search*. Moreover, learners were not expected to use new words in the context, so there was no *evaluation*. Thus, the involvement load was 1.

Group IL2, the first experimental group, was asked to read the same text, however, it did not include the target words. Instead, there were blanks, and the learners were expected to choose the correct one of the target words to fill in these gaps. Words were listed and translated below the text in the same way as for group IL1. Students were then required to answer six comprehension questions (Sláviková, 2021b). Thus, this task included moderate *need*, no *search* and moderate *evaluation* because the words were supposed to be compared and used in the context given. Its involvement load was 2.

When it comes to group IL3, students were asked to write a short essay (80 – 150 words) about their dream job using all target forms listed and translated in the same way as in groups IL1 and IL2 (Sláviková, 2021c). The topic was chosen according to the reading material used for IL1 and IL2 to keep the consistency. Students were, however, allowed to change the topic when they requested it. It means that the *need* was moderate, and there was no element of the *search* included. Unlike group IL2, group IL3 was supposed to use new words in their original sentences and context, therefore, *evaluation* is considered strong, and the overall involvement load was 3.

Research has shown that the involvement load of the task and how much time learners spend with the target words might enhance learning (Folse, 2006). That is the reason why time was also considered. This part of the research was piloted with three students, and it showed that 20 minutes was enough time for each group to complete the task. Therefore, all students were asked not to spend more than 20 minutes on the worksheet.

After completing the tasks, participants completed an immediate vocabulary test measuring how much vocabulary was learned during the activity. Since the Involvement Load Hypothesis is proposed for incidental vocabulary learning, the test was not announced in advance. This way, attention was put on the task and not on the deliberate remembering of new words using other language strategies. Written L2 forms of all ten words were provided, and the learners were expected to recall the meaning and supply the appropriate L1 equivalent or L2 synonym/description. As Laufer and Goldstein (2004) state, this type of meaning recall is called passive. A type of passive meaning recall test was used because "the words are first acquired passively, therefore, the knowledge of word meaning is the central component of word knowledge" (Laufer – Goldstein, 2004, p. 424). The same test form has been used in most experimental studies investigating the ILH (Hulstijn – Laufer, 2001).

Before the experiment, participants were given information in writing and agreed on taking part, and they were randomly assigned to three groups of 15 learners. Due to the current social distancing guideline, the research was conducted online. Each participant was monitored individually. Learners were given all the instructions in their native language in writing to avoid confusion. A pdf file with the task was sent to them. Each participant was monitored, and the amount of time they spent completing the task was measured. After submitting the completed task, participants were sent a link to the post-test. Students were informed to complete another task in advance, however, they did not know it was in the form of a test. Later, students were explained the purpose of the study again in more detail and were informed that non-words were used.

After gathering all the responses from the post-tests, it is necessary to code them (Field, 2017). Answers were coded (Sláviková, 2021d) in the following way: 0 for an incorrect answer and 1 for a correct answer. If the learners provided a different equivalent from the one in the

worksheet but kept the meaning, their answer was marked as correct. If the learners made minor spelling mistakes that did not affect the meaning, their answers were also correct. Descriptive statistics was used to analyse the responses and calculate each group's average score (mean) (Cohen – Manion – Morrison, 2018) using software called Statistical Package for the Social Sciences (SPSS). After calculating the average score, the standard deviation was computed. Standard deviation showed deviations of individual measurements from the mean of the distribution (Punch – Oancea, 2014, p. 311). In other words, it indicates how spread out the numbers were, i.e., the larger the range is, the higher is the standard deviation.

The purpose of this study was to find out if the group completing the task with the highest involvement load learned the most words, thus, if the ILH works in the Slovak EFL context. Therefore, another step was required, i.e., to compare the results of the three groups. Analysis of Variance (ANOVA) is the most common statistical procedure used to compare more than two groups (Dörnyei, 2007). First, it was essential to indicate two variables, dependent and independent (Field, 2017). In this case, the independent variable was the involvement load (1-3), while the amount of the acquired words (correct answers) represented the dependent variable. The aim was to reveal if the independent variable had any impact on the dependent variable. In ANOVA, F value, with a symbol p, needed to be computed to find if the results of the groups were statistically significantly different from each other (Punch – Oancea, 2014). Then, the post-hoc test Tukey was computed to indicate which group was different.

4 Findings

Having explained and justified how data were collected and analysed, this chapter deals with findings showing the results of an experiment conducted among three groups. These three groups of participants represented different involvement loads, Group IL1: involvement load 1; Group IL2: involvement load 2; Group IL3: involvement load 3. Table 4 includes descriptive statistics of data acquired from the immediate post-test. The diagram (see figure 1) illustrates the difference in the total amount of learned words between the three groups.

Total	N	Mean	Standard Deviation
Group IL1	15	4.40	2.063
Group IL2	15	6.13	2.066
Group IL3	15	7.80	1.859
Total	45	6.11	2.405

Table 4 Results from descriptive statistics

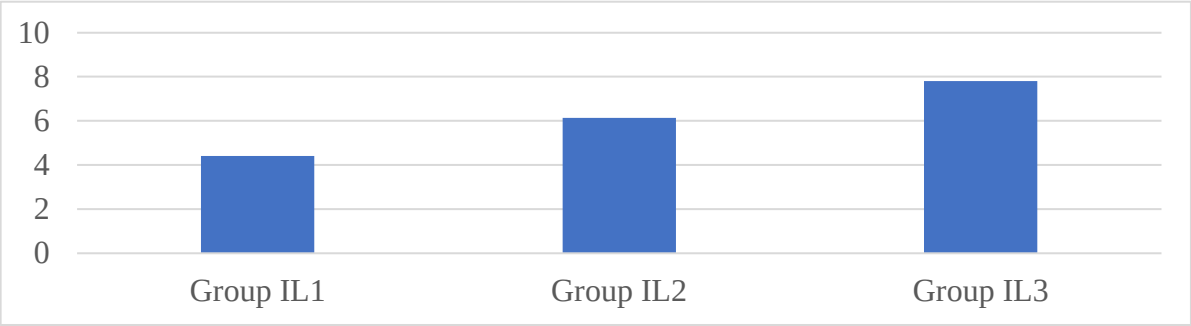

Figure 1 Results from descriptive statistics

Even though the findings from descriptive statistics indicate that vocabulary learning increases with a higher involvement load, a detailed comparison must be made. A one-way

analysis of variance (ANOVA) between three groups was conducted to find out the effect of the involvement load of the task (independent variable) on vocabulary learning (dependent variable). All the relevant assumptions associated with an ANOVA were checked. Levene's test of Homogeneity of Variances test was sig = .92, which means sig > .05. This value shows that the sample sizes are equal, and the variety of scores of each group is similar (Pallant, 2020). Since the assumption of homogeneity was not violated, the groups could be compared, so ANOVA was computed. The *p*-value in ANOVA shows if the scores of the groups vary. In general, the value *p* less than .05 indicates a statistically significant difference between the groups. In this experiment, the total number of learned words was statistically significantly different for the three involvement loads: F (2, 42) = 10.86 *p* = .001. In addition, the effect size (eta squared), which indicates the strength of any significant difference, was calculated using the following formula:

$$\text{Eta squared} = \frac{\text{sum of squares between groups}}{\text{total sum of squares}}; \quad \frac{86{,}711}{254{,}444} = 0.34$$

The resulting eta square value = .34, which is > .14, therefore the effect is considered large (Cohen, 1988) and the influence of the independent variable (involvement load) on the dependent variable (learning vocabulary) is high, which means that involvement load has high effect on vocabulary learning. The following Post Hoc Tukey revealed that the statistically significant difference was between groups IL1 (M = 4.40, SD = 2.06) and 3 (M = 7.80, SD = 1.86): *p* = .001. Group IL2 (M =6.13, SD =2.07) was not statistically significantly different from neither group IL1 nor group IL3: *p* > .05 (group IL2-IL1: *p* = .06; group: IL2-IL3 *p* = .07).

These findings show that vocabulary tasks including a higher involvement load lead to better vocabulary meaning retention. In other words, the high effect of the involvement load and the statistically significant difference between the groups indicate that the higher involvement load makes the vocabulary learning activity more effective for vocabulary learning.

5 Discussion

Analysis of the data from the experiment showed that students who were asked to complete the task with the lowest involvement load (1) recalled the fewest meanings. On the other hand, students required to complete the task with the highest involvement load (3) could recall the most meanings of words. Moreover, descriptive statistics revealed that the average amount of the correct answers (mean score) of group IL2 was higher than group IL1 and lower than group IL3. This supports the ILH, and it might be assumed that the involvement load hypothesis is effective. However, this difference was not statistically significant even though the involvement load of the task differed. Therefore, the results only partially support the Involvement Load Hypothesis (Laufer – Hulstijn, 2001a). However, the effect size was large, which indicates the strong influence of the involvement load. Consequently, the answer to a research question, if a higher involvement load of the vocabulary task leads to higher vocabulary learning among Slovak EFL university learners, is yes. This is similar to the findings of the empirical study of Hulstijn and Laufer (2001b), in which their ILH was fully supported in terms of both initial vocabulary learning and long-term vocabulary retention. Recent studies of Huang (2018) and Sarbazi (2014) found that a higher involvement load leads to higher vocabulary gains.

However, there might be other aspects that lead to more learning apart from the involvement load. For example, language learners need to be exposed to the target words long enough to process and memorize them better (Nation, 2013). Thus, time could be the factor causing the difference in learning between the groups. Although participants in this research

were asked not to spend more than 20 minutes on each task, some submitted the completed worksheet earlier thus, their time differed (see table 5).

Total	N	Mean	Standard Deviation
Group IL1	15	15.07	4.04
Group IL2	15	17.67	3.37
Group IL3	15	19.33	1.35
Total	45	17.36	3.54

Table 5 Time spent completing the tasks

Table 5 shows that group IL1 spent comparatively less time (M=15.07) than group IL3 (M=19.33), which is the reason why the SPSS was used again to compute the possible correlation between time and vocabulary learning. The relationship between time and vocabulary learning was revealed by computing the Pearson correlation coefficient (*r*). If the coefficient is in the range of $r = .50 – 1$, the correlation is strong (Cohen, 1988, p. 81). Also, the results are significant if $p < .05$ (Pallant, 2020). Therefore, it can be concluded that there was a strong statistically significant correlation between time and the total amount of learned vocabulary: $r = .52$, $N = 45$, $p = .001$. In other words, more time spent on completing the task leads to higher vocabulary meaning recall. This is very similar to the findings in Folse's (2006) study in which it was found that learners who were exposed to target items longer were able to recall the meaning of more words than learners who spent less time on the task. Although Keating (2008) also revealed that the ILH did not predict vocabulary learning when the time was controlled on the task. Therefore, these studies concluded that not the involvement load of the activity but the amount of time provided for learners to complete the task enhances learning. However, in the latter study, participants were told about the immediate post vocabulary test, and thus might have applied other vocabulary learning strategies. In addition, Yanagisawa and Webb (2021) compared 42 empirical studies. One of the research questions focused on comparing the involvement load of the task and the time spent completing the task. These findings support Laufer and Hulstijn's (2001b) claim that time is part of the task, and more involving tasks naturally require more time. Thus, a further and more complex analysis of data acquired in this experiment needs to be done to conclude that it is the IL, not time contributing to vocabulary learning among Slovak learners.

Another factor that could lead to these results is learners' differences. Aspects like motivation, language aptitude and proficiency are different for each learner because they are individual (Ellis – Shintani, 2014), thus challenging to control. This could be overcome by experimenting within one group instead of between groups. However, learners were not informed about the immediate test in advance, so it would be difficult to complete three tasks with the same group. If the participants were told about the test, they might try to deliberately memorize the words by applying other language strategies.

Furthermore, differences in the language proficiency of participants might lead to these results. Although participants were carefully chosen and had to be at least intermediate level, some learners might have been more advanced. Language proficiency affects vocabulary learning in general (Ellis, 2015). Consequently, it might be the reason why group IL2 was not statistically significantly different from other groups. However, Kim (2008) compared two groups of 20 ESL international learners that differed in their language proficiency level. Both groups were asked to complete the task with the same involvement load. The results showed that participants with lower proficiency could recall a similar number of words than participants at a higher level of English proficiency. Likewise, learners in this study were competent enough

to understand the text and complete the activity thus, their proficiency has not affected vocabulary acquisition.

Even though the results of this study show that a higher involvement load leads to better vocabulary learning, and it seems to be useful for vocabulary learning, the ILH has some limitations. There are three components in the involvement load of the task which are supposed to make the vocabulary task more effective, however, there are more aspects that need to be considered while designing a task. For example, only one exposure to new words is not enough to remember them, that is why activities should include repetition and spaced repetition to be more effective (Nation – Webb, 2011). Also, effective learning requires paying deliberate attention to the new word and its semantic, orthographic, grammatical and syntactic features as well (Schmitt, 2008). Peters (2012), in her research, compared a vocabulary task that required paying direct attention to the words with the task in which learners focused on the message and found that paying attention to words led to better vocabulary retention. This is, however, not considered in incidental learning, in which attention is paid to the overall message.

6 Conclusion

The results of this study revealed that completing activities with a higher involvement load leads to better vocabulary meaning recall. It can be concluded that vocabulary activities that induce a high involvement load lead to better vocabulary meaning recall in the Slovak EFL context. Thus the Involvement Load Hypothesis can be considered an effective framework to design vocabulary tasks.

6.1 Pedagogical implications

Several implications can be drawn from this study. The findings have shown that the ILH is effective, which is why awareness of the importance of the ILH in teaching and learning vocabulary needs to be spread. Teachers can participate in research more and apply new methods with their students according to the empirical evidence of the research.

Moreover, teachers, learners and textbook creators should consider involvement load and its *need*, *search* and *evaluation* as essential factors while designing their vocabulary activities (Hulstijn – Laufer, 2001b). For example, textbook designers might adapt their instructions to promote dictionaries and more vocabulary retrieval activities.

Even though increasing the aspects of *need* and *search* might be challenging for many teachers working in public schools because the curriculum is usually prescribed by the Slovak Ministry of Education and textbooks are chosen by the institutes, teachers can still provide more opportunities for *evaluation*, i.e., using words in contexts. This can be done by adapting and expanding textbook activities (Sláviková, 2021e) to meet the needs of the learners (McDonough, Shaw and Masuhara, 2013).

However, applying the involvement load hypothesis to every single word might be time-consuming and not practical for learners. Laufer and Hulstijn (2001b) suggest designing highly involving activities for words with a higher language burden and multiple meanings and applying other strategies for simple words. Thus, the ILH should not be applied automatically but requires careful lesson planning.

6.2 Limitations of the research

Every research has its weaknesses, and it is vital to recognise them. Likewise, the design of this study has a few limitations. The efficacy of the involvement load in the vocabulary tasks was measured by an immediate vocabulary post-test which was designed for participants to recall the meaning. There are two limitations of this process. Apart from the immediate post-

test, researchers often use delayed tests too to examine the effect of the vocabulary task on long-term memory (Hulstijn – Laufer, 2001), which is a more efficient way to measure vocabulary knowledge in terms of long-term retention (Kremmel, 2020). Another problem with the post-test was that it only tested receptive knowledge. However, recalling the meaning does not guarantee to have knowledge of other aspects, such as productive knowledge, knowledge of spelling and pronunciation or knowledge of collocations (Nation, 2013).

In addition, due to the current social distancing guidelines, experiments were conducted online, which caused technical difficulties. This resulted in confusion in instructions and less effective monitoring that led to dropping out of nine students during the process because they could not complete either the task or the immediate vocabulary post-test. In addition, each student was instructed and monitored individually, which made collecting data time-consuming.

6.3 Future research

Further vocabulary research is needed in Slovakia because there is a lack of studies focusing on effective vocabulary learning. For example, research dealing with various topics such as extensive reading, learning strategies such as guessing from the context or using flashcards, interactive learning in groups or pairs, or using a communicative approach can be conducted with Slovak learners.

In terms of the ILH, further research is necessary to be done in the Slovak EFL context to overcome the limitations of this study. The experimental study can be conducted within one group to assure no interference of learners' individual differences such as language aptitude, motivation and learning style. For example, the same students could complete three different tasks with various involvement loads. However, such a study design requires careful planning because students might apply other strategies to remember new vocabulary once they realize that there is a vocabulary post-test included. Moreover, acquired data could be analysed using the process of multiple regressions, which allows finding what variables cause learning. In this case, time along with the involvement load could be analysed. Also, the experimental study can be expanded to include both groups completing the tasks with the same involvement load and groups with the tasks with different involvement loads to find any statistically significant difference between these groups.

In addition, researchers can measure long-term vocabulary learning caused by the involvement load of the task by delayed post-test as it was done in many other EFL contexts. Post-tests can also be designed to measure more aspects of vocabulary knowledge, such as using different meanings of the words in the contexts (Nassaji, 2003).

Furthermore, studies among learners at various levels and various ages can be realized. For example, researchers might find whether the vocabulary tasks with a higher involvement load lead to the same vocabulary learning in universities, high schools, primary schools, or autonomous learners.

Despite a few constraints of the involvement load hypothesis, the results provide valuable insight into vocabulary activities used in Slovakia and can serve as a base for other researchers. It is one of the first studies focusing on the framework to evaluate the effectiveness of vocabulary tasks in Slovakia. Since this study has revealed the efficacy of the ILH for learners, the Slovak EFL context can benefit from the results. In other words, if the involvement load is implemented in learning, the efficiency of activities designed to teach vocabulary will be enhanced, leading to developing vocabulary skills and achieving higher language proficiency.

Bibliography:

BAO, G. (2015): Task type effects on English as a Foreign Language learners' acquisition of receptive and productive vocabulary knowledge. In: *System*, 53/30, pp. 84–95. [Cit. 2021-08-07.] Available at: <http://dx.doi.org/10.1016/j.system.2015.07.006.>
BARCROFT, J. (2002): Semantic and structural elaboration in L2 lexical acquisition. *Language Learning*, 52/2, pp. 323–363.
BELANOVÁ, L. (2019): *Najčastejšie chyby v angličtine, ktoré trápia Slovákov*. [Cit. 2021-08-07.] Available at: <https://blog.profesia.sk/najcastejsie-chyby-v-anglictine-ktore-trapia-slovakov/?fbclid=IwAR3vjI8t3zBdlyHNwtoQytkCnS0j_OIi4rygi2jnusu2h7iEclG2hLzY3EA.>
BROWN, R. L. (2000): Extensive reading in action. In: *Studies in English language and literature*, 20/41, pp. 79–123.
COHEN, J. W. (1988): *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates.
COHEN, L. – MANION, L. – MORRISON, K. (2018): *Research Methods in Education* [eBook] 8th ed. London: Taylor & Francis Group. [Cit. 2021-03-07.]
Available at: <http://ebookcentral.proquest.com/lib/ntuuk/detail.action?docID=5103697.>
CRAIK, F. I. – TULVING, E. (1975): Depth of processing and the retention of words in episodic memory. In: *Journal of Experimental Psychology: General*, 104/3, p. 268.
DECI, E. L. – RYAN, R. M. (1985): *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum.
DÖRNYEI, Z. (2014): Motivation in Second Language Learning. In: M. Celce-Murcia – D. Brinton – M. A. Snow (eds.): *Teaching English as a Second or Foreign Language*. Boston, MA: National Geographic Learning, pp. 518–531.
DÖRNYEI, Z. (2001): *Motivational Strategies in the Language Clasroom*. Cambridge: Cambridge University Press.
DÖRNYEI, Z. (2007): *Research Methods in Applied Linguistics: Quantitative, Qualitative, and Mixed Methodologies*. Oxford: Oxford University Press.
ECKERTH, J. – TAVAKOLI, P. (2012): The effects of word exposure frequency and elaboration of word processing on incidental L2 vocabulary acquisition through reading. In: *Language Teaching Research*, 16/2, pp. 227–252.
EF EDUCATION FIRST (2020): *EF English Proficiency Index* [Cit. 2021-14-08.] Available at: <https://www.ef.com/wwen/epi/>.
ELLIS, R. (2015): *Understanding Second Language Acquisition*. 2nd ed. Oxford: Oxford University Press.
ELLIS, R. – SHINTANI, N. (2014): *Exploring Language Pedagogy through Second Language Acquisition Research* [eBook]. London: Taylor & Francis Group. [Cit. 2021-14-08.] Available at: <http://ebookcentral.proquest.com/lib/ntuuk/detail.action?docID=1331869.>
EUROBAROMETER (2012): *Europeans and Their Languages* [Cit. 2021-16-08.] Available at: <https://europa.eu/eurobarometer/surveys/detail/1049.>
FIELD, A. P. (2017): *Discovering statistics using IBM SPSS statistics*. 5th ed. London: SAGE Publications.
FOLSE, K. S. (2006): The effect of type of written exercise on L2 vocabulary retention. In: *TESOL Quarterly*, 40/2, pp. 273–293.
FOLSE, K. S. (2004): *Vocabulary myths: applying second language research to classroom teaching*. Ann Arbor: University of Michigan Press.
FRASER, C. A. (1999): View of The Role of Consulting a Dictionary in Reading and Vocabulary Learning. In: *Canadian Journal of Applied Linguistics*, 2/1-2, pp.73–89.
GARDNER, R. C. (1985): The role of attitudes and motivation in second language learning: correlational and experimental considerations. In: *Language Learning*, 35/2, pp. 207–227.
GRANSKA, Z. (2016): *Angličtina je pre nás stále dôležitejšia. Ako ju môžeme deti učiť efektívnejšie?* [Cit. 2021-14-08.] Available at: <https://eduworld.sk/cd/zuzana-granska/3869/anglictina-je-pre-nas-

stale-dolezitejsia-ako-ju-mozeme-deti-ucit-efektivnejsie.>
HARMER, J. (2015): *The Practice of English Language Teaching*. 5th ed. Harlow, England: Pearson Education Limited.
HU, H. M. – Nassaji, H. (2015): Effective vocabulary learning tasks: Involvement Load Hypothesis versus Technique Feature Analysis. In: *System*, 56/February 2016, pp. 28–39. [Cit. 2021-14-04.] Available at: <http://dx.doi.org/10.1016/j.system.2015.11.001.>
HUANG, S. (2018): A Verification of Involvement Load Hypothesis on Chinese Adult English Learners. In: *International Journal of English Linguistics*, 8/5, pp. 125–134.
HUANG, S. – WILLSON, V. – ESLAMI, Z. (2012): The Effects of Task Involvement Load on L2 Incidental Vocabulary Learning: A Meta-Analytic Study. In: *Modern Language Journal*, 96/4, pp. 544–557.
HULSTIJN, J. H. – LAUFER, B. (2001): Some Empirical Evidence for the Involvement Load Hypothesis in Vocabulary Acquisition. In: *Language Learning*, 51/3, pp. 539–558.
JOE, A. (1998): What effects do text-based tasks promoting generation have on incidental vocabulary acquisition? In: *Applied Linguistics*, 19/3, pp. 357–377.
KEATING, G. D. (2008): Task effectiveness and word learning in a second language: The Involvement Load Hypothesis on trial. In: *Language Teaching Research*, 12/3, pp. 365–386.
KIM, Y. (2008): The role of task-induced involvement and learner proficiency in L2 vocabulary acquisition. In: *Language Learning*, 58/2, pp. 285–325.
KNIGHT, S. (1994): Dictionary Use While Reading: The Effects on Comprehension and Vocabulary Acquisition for Students of Different Verbal Abilities. In: *The Modern Language Journal*, 78/3, pp. 285–299.
KREMMEL, B. (2020): Measuring Vocabulary Learning Progress. In: S. Webb (ed.): *The Routledge Handbook of Vocabulary Studies*. Milton: Taylor & Francis Group, 2020, pp. 406–418.
LAUFER, B. (2020): Evaluating Exercises for Vocabulary Learning. In: S. Webb (ed.): *The Routledge Handbook of Vocabulary Studies*. New York: Taylor & Francis Group, 2020, pp. 351–368.
LAUFER, B. (2003): Vocabulary acquisition in a second language: Do learners really acquire most vocabulary by reading? Some empirical evidence. In: *Canadian Modern Language Review*, 59/4, pp. 567–587.
LAUFER, B. – GOLDSTEIN, Z. (2004): Testing vocabulary knowledge: Size, strength, and computer adaptiveness. In: *Language Learning*, 54/3, pp. 399–436.
LAUFER, B. – HULSTIJN, J. (2001): Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. In: *Applied Linguistics*, 22/1, pp. 1–26.
LI, J. (2014): Effect of task-induced online learning behavior on incidental vocabulary acquisition by Chinese learners – Revisiting Involvement Load Hypothesis. In: *Theory and Practice in Language Studies*, 4/7, pp. 1385–1394.
LOJOVÁ, G. (2016): Humanizing English language teaching in Slovakia. In: *XLinguae*, 9/4, pp.30–36.
MANSON, J. (2002): *Qualitative Researching*. 2nd ed. London: SAGE Publications.
MARTÍNEZ-FERNÁNDEZ, A. (2008): Revisiting the Involvement Load Hypothesis: awareness, type of task and type of item. In: *2007 Second Language Research Forum*, Somerville, Cascadilla Press, pp. 210–228.
MCDONOUGH, J. – SHAW, C. – MASUHARA, H. (2013): *Materials and Methods in ELT – A Teacher's Guide*. 3rd ed. Oxford: John Wiley & Sons, Inc.
MCNEILL, P. – CHAPMAN, S. (2005): *Research Methods* [eBook] 3rd ed. London: Taylor & Francis Group. [Cit. 2021-14-06.] Available at: <http://ebookcentral.proquest.com/lib/ntuuk/detail.action?docID=200742.>
MEARA, P. (1994): The complexities of simple vocabulary tests. In F. G. Brinkman – J. A. van der Schee – M. C. Schouten-van Parreren (eds.): *Curriculum research: Different disciplines and common goals*. Amsterdam: Vrije Universiteit, pp. 15–28.
NAKATA, T. – WEBB, S. (2016): Does studying vocabulary in smaller sets increase learning. In: *Studies in Second Language Acquisition*, 38/3, pp. 523–552.
NASSAJI, H. (2003): L2 Vocabulary Learning from Context: Strategies, Knowledge Sources, and Their Relationship with Success in L2 Lexical Inferencing. In: *TESOL Quarterly*, 37/4, pp. 645–670.

NASSAJI, H. – HU, H. M. (2012): The relationship between task-induced involvement load and learning new words from context. In: *International Review of Applied Linguistics in Language Teaching*, 50/1, pp. 69–86.
NATION, I. S. P. (2001): *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
NATION, I. S. P. (2013): *Learning Vocabulary in Another Language* [eBook] 2nd ed. Cambridge: Cambridge University Press. [Cit. 2021-14-04.] Available at: <https://www.cambridge.org/core/books/learning-vocabulary-in-another-language/25C481C771758930E8EBBE811231FEB7.>
NATION, I. S. P. – WEBB, S. (2011): *Researching and analyzing vocabulary*. Boston: Heinle Cengage Learning.
NATION, P. (2013): Designing reading tasks to maximise vocabulary learning. In: *Applied Research on English Language*, 3/1, pp.1–8. [Cit. 2021-17-06.] Available at: <http://uijs.ui.ac.ir/are/browse.php?a_code=A-10-68-23&slc_lang=en&sid=1&sw=Nation.>
NUNAN, D. (2010): *Collaborative Language Learning and Teaching.* Cambridge: Cambridge University Press.
NYIKOS, M. – FAN, M.Y. (2007): A review of vocabulary learning strategies: focus on language proficiency and learner voice. In: A. D. Cohen – E. Macaro (eds.): *Language Learner Strategies*. Oxford: Oxford University Press, 2007, pp. 252–274.
O'MALLEY, J. M. – CHAMOT, A. U. (1990): *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press.
OGDEN, C. K. (1922): *Tractatus Logico-Philosophicus (TLP)*. London: Routledge & Kegan Paul.
OXFORD, R. L. (2011): Strategies for learning a second or foreign language. In: *Language Teaching*, 44/2, pp. 167–180.
PALLANT, J. (2020): *SPSS Survival Manual: a Step by Step Guide to Data Analysis Using IBM SPSS* [eBook] 7th ed. Maidenhead: McGraw-Hill Education. [Cit. 2021-14-08.] Available at: <http://ebookcentral.proquest.com/lib/ntuuk/detail.action?docID=6260745.>
PETERS, E. (2012): The differential effects of two vocabulary instruction methods on EFL word learning: A study into task effectiveness. In: *IRAL – International Review of Applied Linguistics in Language Teaching*, 50/3, pp. 213–238.
PUNCH, K. – OANCEA, A. (2014): *Introduction to research methods in education*. 2nd ed. London: SAGE Publications.
SARBAZI, M. R. (2014): Involvement Load Hypothesis: Recalling Unfamiliar Words Meaning by Adults across Genders. In: *Procedia – Social and Behavioral Sciences*, 2014/98, pp. 1686–1692. [Cit. 2021-14-05.] Available at: <http://dx.doi.org/10.1016/j.sbspro.2014.03.594.>
SCHMIDT, R. W. (1990): The role of consciousness in second language learning. In: *Applied Linguistics*, 11/2, pp. 129–158. DOI: 10.1093/applin/11.2.129.
SCHMITT, N. (2008): Instructed second language vocabulary learning. In: *Language Teaching Research*, 12/3, pp. 329–363.
SCHMITT, N. (2010): *Researching Vocabulary: A Vocabulary Research Manual*. Palgrave Macmillan.
SCHMITT, N. (2000): *Vocabulary in Language Teaching*. Cambridge: Cambridge University Press.
SCHMITT, N. – SCHMITT, D. (2020): *Vocabulary in Language Teaching* [eBook] 2nd ed. Cambridge: Cambridge University Press. [Cit. 2021-12-06.] Available at: <https://www.cambridge.org/core/books/vocabulary-in-language teaching/1C01668DA6F51F9CC8192A70F21FE2EB.>
SELIGER, H. W. – SHOHANY, E. (2001): *Second Language Research Methods*. Oxford: Oxford University Press.
SKEHAN, P. (1989): *Individual Differences in Second Language Learning*. London: Arnold.
SLÁVIKOVÁ, I. (2021a): *APPENDIX 1: WORKSHEET GROUP IL1*. [Cit. 2021-08-07.] Available at: <https://drive.google.com/file/d/1C3mgr-ny35oXxLSOsJOMo_qyCVUSGXxj/view?usp=sharing>
SLÁVIKOVÁ, I. (2021b): *APPENDIX 2: WORKSHEET GROUP IL2*. [Cit. 2021-08-07.] Available at:

<https://drive.google.com/file/d/1Vf4CMrl-r6BCI49QV1k9e4yGwM9CKe99/view?usp=sharing>
SLÁVIKOVÁ, I. (2021c): *APPENDIX 3: WORKSHEET GROUP IL3*. [Cit. 2021-08-07.] Available at: <https://drive.google.com/file/d/1XY8GS1q5dQyGtzRwM5waMcLiIFYTTKe1/view?usp=sharing>
SLÁVIKOVÁ, I. (2021d): *APPENDIX 4: CODING FOR SPSS*. [Cit. 2021-08-07.] Available at: <https://drive.google.com/file/d/1XY8GS1q5dQyGtzRwM5waMcLiIFYTTKe1/view?usp=sharing>
SLÁVIKOVÁ, I. (2021e): *APPENDIX 5: SUGGESTED ACTIVITIES*. [Cit. 2021-08-07.] Available at: <https://drive.google.com/file/d/1f4mLuwF6r6OmHVAS_vc8Xalz68tF8yw7/view?usp=sharing >
Slovak Ministry Of Education (2018): *Vyše 80 percent maturantov si vybralo anglický jazyk*. [Cit. 2021-14-07.] Available at: <https://www.minedu.sk/vyse-80-percent-maturantov-si-vybralo-anglicky-jazyk/.>
SUNDERLAND, J. (2020): Research Questions in Linguistics. In: L. Litosselity (ed.): *Research Methods in Linguistics*. London: Bloomsbury Academic 2020, pp. 13–24.
TANG, C. – TREFFERS-DALLER, J. (2016): Assessing Incidental Vocabulary Learning by Chinese EFL Learners: A Test of the Involvement Load Hypothesis. In: *Assessing Chinese learners of English.* London: Palgrave Macmillan, pp. 121–149.
TRUSCOTT, J. (1998): Noticing in second language acquisition: A critical review. In: *Second Language Research*, 14/2, pp. 103–135.
WEBB, S. – NATION, I. S. P. (2017): *How vocabulary is learned*. Oxford: Oxford University Press.
WILLIAMS, J. N. (2012): Working Memory and SLA. In: S. M. Gass – A. Mackey (eds.): *The Routledge Handbook of Second Language Acquisition*. Oxton: Taylor & Francis Group, pp. 427–441.
YANAGISAWA, A. – WEBB, S. (2021): To What Extent Does the Involvement Load Hypothesis Predict Incidental L2 Vocabulary Learning? A Meta-Analysis. In: *Language Learning*, 71/2, pp. 487–536.
ZIMMERMAN, C. B. (1997): Historical trends in second language vocabulary instruction. In: J. Coady – T. Huckin (eds.): *Second Language Vocabulary Acquisition: A Rationale for Pedagogy*. Cambridge: Cambridge University Press 1997.
ZIMMERMAN, C. B. (2014): Teaching and Learning Vocabulary for Second Language Learners. In: M. Celce-Murcia – D. Brinton – M. A. Snow (eds.): *Teaching English as a Second or Foreign Language*. Boston: National Geographic Learning, pp. 288–303.

Summary:

Investigating the Effectiveness of Involvement Load Hypothesis in Vocabulary Learning in the Slovak EFL Context

Vocabulary learning is a crucial part of English language acquisition. In order to learn vocabulary successfully, there is a need for effective vocabulary tasks. There are many tools to measure vocabulary task efficacy, and one of them is the Involvement Load Hypothesis. The ILH was evaluated by conducting an experimental study between three groups of 15 Slovak EFL learners. Learners completed tasks with different involvement loads and unannounced immediate post-test focused on meaning recall. The findings partially supported the Involvement Load Hypothesis. Students who had finished the task with the highest involvement load were found to recall significantly more meanings than students who had carried out the task with the lowest involvement load. However, the vocabulary gains of the learners who had completed the task with a moderate involvement load were not significantly different from other groups. This study shows that increasing the involvement load in the vocabulary tasks can be highly beneficial for Slovak EFL learners. Moreover, teachers and learners can benefit from this valuable insight into the effectiveness of materials used for teaching and learning vocabulary.