The role of self-regulation in EFL vocabulary knowledge

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Master's thesis / Diplomski rad

2017

Degree Grantor / Ustanova koja je dodijelila akademski / stručni stupanj: **Josip Juraj Strossmayer University of Osijek, Faculty of Humanities and Social Sciences / Sveučilište Josipa Jurja Strossmayera u Osijeku, Filozofski fakultet**

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:142:467247

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Download date / Datum preuzimanja: **2024-03-28**

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J. J. Strossmayer University of Osijek

Faculty of Humanities and Social Sciences

Study Programme: Double Major MA Study Programme in English Language and Literature – Teaching English As a Foreign Language and Pedagogy

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The Role of Self-Regulation in EFL Vocabulary Knowledge

Master's Thesis

Supervisor: Dr. Višnja Pavičić Takač, Full Professor

Osijek, 2017.

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Znanstveno polje: filologija

Znanstvena grana: anglistika

Mentor: prof. dr. sc. Višnja Pavičić Takač

Osijek, 2017.

TABLE OF CONTENTS

1. Introduction…….. 5
2. Theoretical background
    2.1. Definition of self-regulation…….. 6
    2.2. Zimmerman's cyclical model of self-regulation…… 8
3. Self-regulation vs learning strategies……... 11
4. Self-regulation and language learning……. 13
    4.1. Self-regulation in vocabulary learning…….. 14
5. Vocabulary knowledge…… 17
6. Review of related studies……. 19
7. The research
    7.1. Aim and research questions……... 21
    7.2. Participants……. 21
    7.3. Instruments……. 22
    7.4. Procedure……... 24
    7.5. Results…… 24
    7.6. Discussion…….. 28
8. Conclusion…… 31
9. Bibliography……. 33
10. Appendices:
    10.1. Appendix A: Self-regulating capacity in vocabulary learning scale (SRCvoc)…… 37
    10.2. Appendix B: Swansea Vocabulary Levels Test (X-Lex)……... 38
    10.3. Appendix C: Demographic questionnaire…….. 39

Abstract

This study investigates the role of self-regulation in English foreign language (EFL) vocabulary knowledge and whether learners' attitudes towards vocabulary learning, perception of difficulty and gender, influence learners' self-regulation capacity (SRC). The "SRCvoc" questionnaire and X-Lex Test were administered to a sample of 268 learners. The results of Pearson's correlation revealed significant correlation between learners' attitudes towards vocabulary learning, their perception of difficulty and SRC but no significant relationship between learners' SRC and their vocabulary size. The results of the independent-sample t-test revealed no significant difference in the mean SRC for males and females.

Key words: self-regulation, vocabulary, learners' attitudes, perception of difficulty, gender

Sažetak

U ovom se radu istražuje uloga samoregulacije u učenju vokabulara engleskoga kao stranog jezika i utječu li stavovi učenika o učenju vokabulara, procjena težine jezika i spol na učeničku sposobnost samoregulacije. 268 učenika je ispunilo "SRCvoc" upitnik i X-Lex Test. Rezultati Pearsonove korelacije pokazuju da ne postoji povezanost između učeničke sposobnosti samoregulacije i njihove veličine vokabulara, ali da postoji značajna povezanost između stavova učenika o učenju vokabulara, procijenjene težine jezika i sposobnosti samoregulacije. Rezultati t-testa pokazuju da ne postoji značajna razlika u srednjoj vrijednosti samoregulacijske sposobnosti među spolovima.

Ključne riječi: samoregulacija, vokabular, stavovi učenika, procijenjena težina jezika, spol

1. Introduction

The studies in the area of learning strategies have been introduced and intensively investigated more than three decades ago but they did not succeed in persuading scholars that their application necessarily leads to learning success. Therefore, the study of learners' self-regulated learning gained importance and scholars replaced the concept of learning strategies with that of self-regulation.

There are many theories and definitions which explain self-regulation but in this research paper the emphasis will be on volitional theory and definition proposed by Tseng and his associates. They defined self-regulation as the underlying capacity driving learners' efforts to search for and apply personalized strategic learning mechanisms (Tseng et al., 2006). Although studies on self-regulation, in the fields of education and psychology, have been carried out over the last two decades, the concept is still insufficiently researched in the area of second language learning, and more specifically vocabulary learning which presents the subject of interest in this research paper. Further research is needed to explain the role of self-regulated learning on vocabulary learning in English as a second language.

Fundamental reason for this research is to investigate the relationship between learners' self-regulation in vocabulary learning and their vocabulary size. What is evident is that it is impossible for the learners to learn all the necessary vocabulary in the classroom and that something has to be done to direct and instruct learners to self-regulate their vocabulary learning. It is crucial to investigate this in order to expand learners' vocabulary knowledge, which has a crucial role in knowing a second language, and help learners learn how to acquire vocabulary and attain their personal vocabulary related goals on their own.

This research paper consists of two parts. The first is the theoretical part which presents an overview of different definitions and models. It outlines general models of self-regulated learning as well as models oriented toward vocabulary learning. It also compares self-regulation and language learning strategies and explains vocabulary knowledge and its components. Lastly, it provides a review of studies that investigated self-regulation and language learning in general and vocabulary learning in specific. The second part presents the study carried out among primary and secondary school learners aiming at exploring the relationship between their self-regulation capacity and vocabulary size.

2.1. Definition of self-regulation

Very early, educational leaders have recognized and stressed the importance of individuals assuming personal responsibility and control for their own acquisition of knowledge and skills (Zimmerman, 1990). Research on self-regulation learning emerged more than two decades ago to answer the question of how learners become masters of their own learning processes (Zimmerman, 2008). Self-regulation is a term introduced by a group of North American educational psychologists who are especially interested in the social, psychological and behavioral characteristics contributing to academic success (Benson, 2001). By the beginning of the 1990s, the study of self-regulation has come of age and in the last three decades has become a central concept in psychology, as researchers tried to integrate cognitive, affective, motivational and behavioral components into theories that explain how individuals adjust their actions and goals to achieve desired results under changeable conditions (Ranalli, 2012). Research on self-regulated learning evolved as a result of developments in theoretical paradigms and methodologies when researchers such as Ann Brown, Joel Levin, Donald Meichenbaum, Michael Pressley, Dale Schunk focused on the impact of individual self-regulatory processes, such as strategy use, goal setting, imagery, or self-instruction during the 1970s and 1980s (Zimmerman, 2008).

There are different theories that explain self-regulation. Representatives of operant theory Mace et al. (1989) define self-regulation as the actions of learners that alter the environment at one point in time and that make more or less probable certain actions at a later point in time. Mace et al. (1989) explain that self-regulation involves choosing among alternative courses of action, typically by deferring an immediate reinforcer in favor of a different and greater future reinforce. According to McClelland et al. (2015) self-regulation presents the processes through which a person regulates his or her environment, such as adopting information, weighing choices and consequences, and making adaptive choices to attain a specific goal, whereas the context insures conditions that similarly regulate the person's development. This theory emphasizes the importance of delayed gratification and how it can be enhanced by "reinforcers" (Ranalli, 2012). Representatives of phenomenological theory describe self-regulation as strongly dependent on the various development phases of the basic self-system which is strongly linked to age and adopt an active role in encouraging self-regulated learning sustaining direct intervention on self-perception as the key to supporting open performance (Bramucci, 2013). They accept the primacy of self-phenomena in directing learning behaviors

(McCaslin et al., 2011) and explore self-perceived identities that can be academic or non-academic in nature, and how these identities affect perceptions of tasks, goals etc. (Ranalli, 2012). Representatives of information processing theory define self-regulation as types of control processes under the learner's direction which facilitate processing and movement of information through the system. They equate it to metacognitive awareness which includes knowledge of the task and self-knowledge of personal capabilities, interests, and attitudes (Schunk and Zimmerman, 2003). Winnie (1995, as cited in Winnie, 1996) defines self-regulation as an aptitude and explains it as a developable aptitude that changes incrementally with experience and instruction which dynamically adapts how one engages with tasks. Social cognitive theorists emphasize that self-regulation is situation specific (Schunk and Zimmerman, 2003, as cited in Sorić, 2014). It is not expected of a learner to be equally self-regulated in all domains of learning but to know how to adapt the processes of self-regulation to specific domain and feel efficient while doing so. Zimmerman (2004, as cited in Fatemipour and Najafgholikhan, 2015) presents self-regulation as thoughts, feelings and actions that are planned and adapted to the attainment of personal goals. Moreover, he defines it as the self-directive processes and self-beliefs that enable learners to transform their mental abilities into an academic performance skill and processes learners use to acquire academic skill, such as setting goals, selecting and deploying strategies, and self-monitoring one's effectiveness (Zimmerman, 2008). Furthermore, Zimmerman (1986, as cited in Zimmerman, 2008) gives an inclusive definition of self-regulation as the degree to which learners are metacognitively, motivationally, and behaviorally active participants in their own learning process and focus on their proactive use of processes or responses to improve their academic achievement. Volitional theorists focus on learners' strive to initiate or maintain good learning habits despite distractions. Tseng et al. (2006) define self-regulation as a new approach to conceptualizing and assessing strategic learning and define it as the underlying capacity driving learners' efforts to search for and apply personalized strategic learning mechanisms while Corno (1994, as cited in Duckworth et al., 2009) defines it as students' tendency to maintain focus and effort despite potential distractions. In this research the focus will be on Tseng and his colleagues' theory of self-regulation because they applied it to second language learning, and more specifically, vocabulary learning and developed the instrument for measuring self-regulating capacity in vocabulary learning. Theorists continuing the work of L. Vygotsky define self-regulation in terms of verbalization or self-directed speech learners use when working under challenging conditions (Ranalli, 2012). They explain that self-regulation starts as an interpersonal level by means of contact with adults and is internalized

throughout infancy (Bramucci, 2013). Constructivist theories focus on learners' cognitive processes as they construct strategies and theories needed to solve academic tasks, or their involvement in co-construction of effective modes of academic performance. Pintrich (2000, as cited in Sorić, 2014) defines self-regulation as an active constructive process and the reason why learners determine their learning goal and then try to follow, regulate and control their cognition, motivation and behavior while guided and restricted by their goals and contextual features of their environment.

A model of self-regulation established on any of these theories can provide understanding into the process of second language acquisition in general and second language vocabulary learning in particular. Each theory can explain the influence of self-regulation on success in learning, but each focuses on different aspects of how it is achieved (Ranalli, 2012).

2.2 Zimmerman's cyclical model of self-regulation

Zimmerman defines self-regulation as self-generated thoughts, feelings, and behaviors that are planned and cyclically adapted based on performance feedback in order to attain self-set goals (Cleary et al., 2012). Zimmerman's cyclical phase model describes the role of self-regulation over different stages of a learning cycle with the processes divided into three phases: forethought phase, performance phase and self-reflection phase (Panadero and Alonso-Tapia, 2014). The forethought phase precedes actual performance and represents the processes that set the stage for action. The performance phase includes processes that happen during learning and influence attention and action. During the self-reflection phase, which happens after performance, learners respond to their efforts (Zimmerman and Schunk, 2001, as cited in Schunk, 2012). These phases are interdependent so that changes in forethought phase impact performance phase, which, in turn, influence self-reflection phase (Cleary et al., 2012).

Forethought phase is the initial phase in which the learners approach the task, analyze it, assess their capacity to perform it with success and set goals and plans regarding how to complete it. In this phase the learners analyze what the task characteristics are by creating a first representation of how it should be performed and analyze the value the task has for them. This is how they activate their self-regulatory strategies. As can be seen in *Figure 1*. there are various self-regulatory variables important during the mentioned phase. For example, self-efficacy beliefs, outcome expectations, task interest

and value, and goal orientation (Zimmerman, 2008). These five variables are interrelated and interact during the self-regulatory process and especially during forethought phase (Panadero and Alonso-Tapia, 2014). The learners' self-regulation depends on the level and type of motivation coming from these variables and is therefore so different among the learners.

During performance phase the learners perform tasks and should keep their concentration and use appropriate learning strategies. Self-observation and self-control are two main processes happening during this phase. The learners self-observe successfully by self-monitoring and self-recording and maintain their concentration by self-controlling various strategies, such as: task strategies, self-instruction, imagery, time management, help-seeking etc. (Panadero and Alonso-Tapia, 2014).

During self-reflection phase learners judge their work and formulate reasons for their results. While justifying their success or failure, they experience positive or negative emotions which will influence their motivation and regulation in the future. Self-judgment is the process through which the learners assess their performance and it includes self-evaluation and causal attribution, while self-reaction refers to the learners' emotional and cognitive reactions to their own attributions and it includes self-satisfaction/affect and adaptive/defensive decisions (Panadero and Alonso-Tapia, 2014). This phase affects learners' future planning and goals, initiating the cycle to begin again (Zumbrunn et al., 2011) and therefore self-regulated learners must continually adjust their goals and choice of strategies. This model proposes that there are 14 categories of self-regulated learning strategies. These strategies include self-evaluation, organizing and transforming, goal-setting and planning, seeking information, keeping records and self-monitoring, environmental structuring, self-consequences, rehearsing and memorizing, seeking peer, teacher, or adult assistance, and reviewing notes, tests, or textbooks (Zimmerman and Martinez-Pons, 1988).

Zimmerman's cyclical theory proposes that self-regulation is likely to advance with practice because successful self-regulators will draw on their previous learning experience to build a growing repertoire of beliefs and strategies that enhance learning (Duckworth et al., 2009). Moreover, it covers cognitive, behavioral and motivational aspects and explains the relationship between motivation and self-regulation. This model is very extensive as it covers the majority of key processes happening when a learner is studying and offers a theoretical framework that determinates what aspects are relevant if we want to improve learners' self-regulation. Moreover, this model can be applied and extended to any task or activity to understand human regulation (Cleary et al., 2012).

It is proven that teaching learners to engage in self-regulation in all three phases has desirable effects on strategic thinking and attributions (Cleary et al., 2006, as cited in Schunk, 2012). The potential for self-regulation differs depending on choices available to learners but it is useful to ask to what degree one engages in self-regulation rather than whether one is self-regulated since some situations allow minimum or maximum self-regulation or lie somewhere between these extremes (Schunk, 2012).

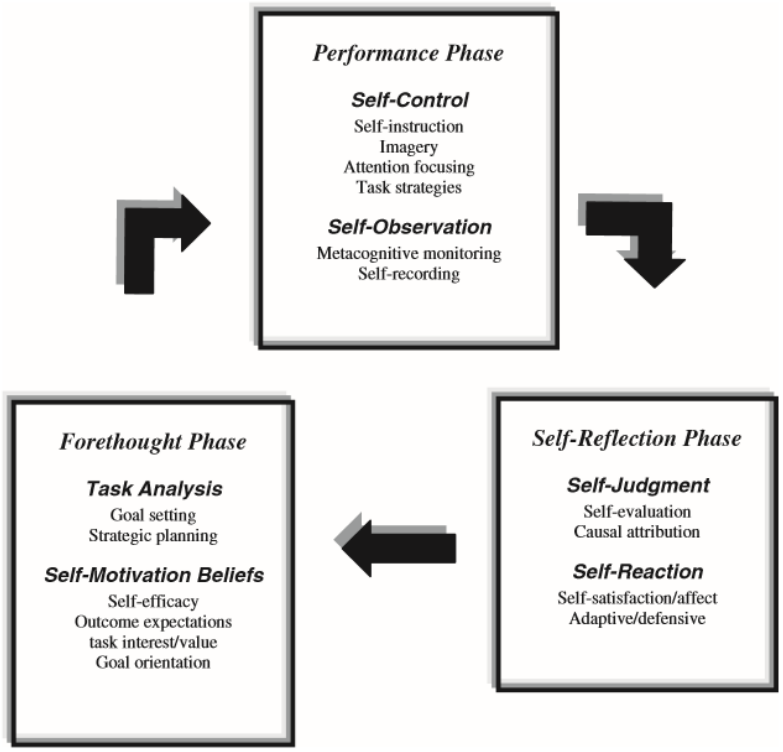


Figure 1. Self-regulation cycle phases (from Zimmerman, 2008)

3. Self-regulations vs learning strategies

Due to deficiencies and problems including theoretical and methodological complexities in language learning strategies research, many researchers (e.g. Tseng et al. 2006; Dőrnyei 2005; Ellis 1994; Macaro 2006; Oxford 2016) propose a research shift from learners' use of language learning strategies to their self-regulation in language learning.

Regarding learning strategies, Oxford (1990:8) defined them as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self - directed, more effective, and more transferable to new situations". They represent particular actions, behaviors, steps, or techniques employed by learners to enhance their own learning and can be classified into six groups: cognitive, metacognitive, memory related, compensatory, affective, and social.

It was believed that learning strategies could enhance the effectiveness of learners' performance on the educational tasks, lead to success in language learning as well as facilitate the learning process and lead to higher language proficiency (Amirian et al. 2015). However, others (e.g., Dörnyei & Skehan, 2003; Ellis, 2008) have questioned their validity and have indicated to the fact that the research undertaken under the term of language learning strategies suffers from a number of problems which stem from fuzziness of definitions of the terms used (e.g., diverse conceptualizations of 'learning strategies') or inherent psychometric characteristics of the assessment instruments (i.e., how to operationalize and measure the constructs) which are applied to collect the necessary data. Tseng et al. (2006) argued that the concept itself is questionable because it conceptualizes strategies as phenomena that can be behavioral, cognitive or affective in nature. Secondly, they criticize instruments used to categorize and quantify strategy use, especially the Strategy Inventory for Language Learning (SILL) developed by Oxford. Dörnyei (2005, as cited in Ranalli, 2012) explained that the rating scales used in the SILL are based on frequency of use, they are not cumulative nor psychometrically justifiable. Language learning strategies are still under-theorized as a construct and researchers have yet to agree on whether they should be regarded as either observable behaviors or inner mental operations, or both (Tseng et al., 2006, as cited in Gao, 2007). Above mentioned problems related to language learning strategies are the reasons why self-regulation gained importance.

Since the focus of this research is on vocabulary, issues connected to vocabulary learning strategies will be emphasized. Vocabulary learning strategies represent a subset of general learning strategies in

second language acquisition (Hamzah et al., 2009). Schmitt (1997, as cited in Hamzah et al., 2009: 41) defined learning as "the process by which information is obtained, stored, retrieved and used... therefore vocabulary learning strategies could be any which affect this broadly defined process". Until recently, vocabulary learning strategies played an important role in developing learners' self-regulatory capability in learning vocabulary (Graves and Fink, 2007, as cited in Ma Ping and Siraj, 2012). However, most studies on vocabulary learning strategies focused on cognitive strategies and less concern was given to metacognitive and affective factors of vocabulary learning (Rasekh and Ranjbary, 2003, as cited in Ma Ping and Siraj, 2012). Moreover, Tseng et al. (2006) recognized that there was no direct relationship between use of a specific strategy and vocabulary learning success and concluded that "the most important aspect of strategic learning is not the exact nature of the specific techniques that learners employ but rather the fact that they choose to exert creative effort in trying to improve their own learning" (Tseng et al., 2006: 95). Therefore, they introduced the notion of self-regulation as a new approach in conceptualizing and assessing strategic learning and emphasized the learners' innate self-regulatory capacity to search for and apply personalized strategic learning mechanisms. They created an instrument dealing with self-regulation through the use of action control strategies, which originate in volitional research from experimental psychology and educational psychology. In order to increase construct validity, these strategies were appointed in the domain of second language vocabulary learning since this aspect of second language acquisition demands incessant individual effort over time (Ranalli, 2012). The resulting construct is called Self-Regulating Capacity in Vocabulary Learning, or SRCvoc, and consists of five facets of control which operate over the intention to learn rather than learning behaviors directly (Ranalli, 2012).

4. Self-regulation and language learning

Self-regulation has been gaining increasing attention in language learning since 1970 (Ma Ping and Siraj, 2012) in order to teach learners how to learn and develop their independent learning capacity (Benson, 2001, as cited in Ma Ping and Siraj, 2012). In order to become self-regulated and learn how to make their own learning decisions, learners need assistance in planning, goal-setting, effort management, comprehension, monitoring, evaluation, and persistence throughout the learning process (Seker, 2016). When used effectively, these strategies facilitate language learning and lead to extensive learning and higher performance in language skills such as speaking, reading comprehension, and vocabulary (Seker, 2016). Language acquisition requires a considerable investment of time as well as maintaining high levels of motivation and persistence and this is something that self-regulation enables. Researchers and educators advise promoting self-regulation in all teaching contexts for all age levels of learners claiming that it will lead to positive outcomes, such as enhancing learning and fostering students' ability to control and shape their own learning. It is believed that learners with strategic knowledge of language learning, compared with those without, become more efficient, resourceful, and flexible and acquire a language more easily (Tseng et al., 2006).

Rebecca Oxford, a researcher who significantly contributed to development and the recognition of learning strategies, recognized the potential of self-regulation and re-conceptualized language learning strategies by employing self-regulation as a way to help learners manage and control their own language learning. She proposed a Strategic Self-Regulation (S^2R) Model of language learning in which learners actively and constructively employ strategies to manage their own learning (Oxford, 2010). In this model, self-regulated second language learning strategies are explained as intentional, goal-directed attempts to manage and regulate efforts to learn the second language (Afflerbach et al., 2008, as cited in Oxford, 2016). Moreover, they are defined as broad, teachable actions that learners select and employ for second language learning purposes. Oxford's model includes strategies for three major, mutually influential dimensions of second language learning: cognitive, affective, and sociocultural-interactive (SI). Cognitive strategies help learners structure, transform, and apply second language knowledge, affective strategies help them create positive emotions and attitudes and stay motivated while sociocultural-interactive strategies help with communication, sociocultural contexts, and identity. S^2R Model contains strategies as well as three types of metastrategies: metacognitive strategies, meta-affective strategies and meta-SI strategies. The term "meta" has been introduced

because prior taxonomies of strategies had no term to describe control of affective and social dimension but were only providing general control of cognitive strategies. The idea of metastrategies reflects the multidimensional reality of the second language learner since they help the learner know whether and how to develop a given strategy and aid in determining whether the strategy is working as intended. Strategies and metastrategies in the model are quite dynamic and respond to changing needs of the learner for different purposes in various sociocultural contexts. Except for strategies and metastrategies this model includes tactics as well. They represent particular manifestations of a strategy or metastrategy by a specific learner in a given setting for a certain purpose and their number depends on the learner, the needs, and the circumstances. Model includes three phases for doing a task or solving a problem: strategic forethought, strategic performance and strategic reflection and evaluation which suggest when certain learning strategies or metastrategies are likely to be useful. However, the phases are not always linear nor strategically distinct because learners can use them in a different order and because some strategies can appear in multiple phases. This model proposed two basic assumptions. The first assumption is that almost everyone can learn an additional language effectively by using appropriate strategies and assuming some basic interest and sufficient time in learning it. The second assumption is that strategies can be learned through mediation or assistance since the learning is assumed to be assisted performance.

4.1 Self-regulation in vocabulary learning

Vocabulary learning plays an essential role in any language learning context and is crucial for developing proficiency in a foreign language. It is one of the most important aspects of language competence and its acquisition is essential for the improvement of the receptive and productive language skills (Amirian et al., 2015). Some authors (Long and Richards, 2007, as cited in Milton and Alexiou, 2010) claim that vocabulary is the core component of all the language skills. However, many learners have difficulty learning, memorizing and recalling vocabulary and that is one of the reasons why teachers try to employ various methods to teach vocabulary in order to achieve the best outcome (Fatemipour and Najafgholikhan, 2015). This is what encourages researchers to investigate how the learners' strategy use can contribute to or enhance their vocabulary knowledge (Amirian et al., 2015). Tseng and Schmitt (2008) used structural equation modeling (SEM) to develop their structural model which integrated vocabulary knowledge, motivation and six latent variables: initial appraisal of

vocabulary learning experience, self-regulating capacity of vocabulary learning, strategic vocabulary learning involvement, mastery of vocabulary learning tactics, vocabulary knowledge, and postappraisal of the effectiveness of vocabulary learning tactics.

The model shows that the process of vocabulary learning is cyclical in nature and starts with an initial appraisal of vocabulary learning experience, which is the initial motivational level of vocabulary learning and can be indicated by value, interest or effort (Schmitt, 2010). That initial motivational level affects learners' self-regulation capacity in vocabulary learning which in turns drives the use of vocabulary strategies (Schmitt, 2010). What follows is strategic behavior which is separated into two components: strategic vocabulary learning involvement and mastery of vocabulary learning tactics. Strategic vocabulary learning involvement refers to a quantity dimension of strategy use and regards covert or overt acts to reveal or improve the effectiveness of specific tactics. It includes the overall vocabulary learning involvement and the attempts made to achieve it. Mastery of vocabulary learning tactics refers to the quality dimension of strategy use and concerns with mastering specific covert or overt learning methods to learn vocabulary. Vocabulary knowledge tries to operationalize depth of knowledge as a combination of three factors: knowledge of the different possible meanings of a word (polysemy), knowledge of its collocational constraints, and knowledge of its spelling (Tseng and Schmitt, 2008). The model hypothesizes that improvements in vocabulary size and depth will directly affect vocabulary learners' retrospection of task performance (Tseng and Schmitt, 2008). Consequently, the learners will, depending on the outcome of vocabulary learning, critically evaluate the whole process, "have positive or negative reactions to the performance outcome, and make attributions for the performance outcome" (Pintrich, 2000, as cited in Tseng and Schmitt, 2008, 368). It is hypothesized that the postappraisal of vocabulary learning tactics can influence future vocabulary learning. This phase signifies the period of self-reflection of task processes after the task is finished (Tseng and Schmitt, 2008). According to Dőrnyei, this phase is very important because "a critical retrospection contributes significantly to accumulated experience, and allows the learner to elaborate his or her internal standards and the repertoire of action specific strategies" (2001, as cited in Tseng and Schmitt, 2008, 368). Hence, not only does initial motivational state affect the processes of task performance, but also a retrospection of task performance affects this state in a cyclical manner (Tseng and Schmitt, 2008). Accordingly, Tseng and Schmitt (2008) list some authors (such as Garcia et al., 1998; Gardner et al., 1997; MacIntyre & Noels, 1996; Schmidt & Watanabe, 2000) who claim that learners who have a confirmative initial motivation concerning high self-efficacy, positive task value,

and low learning anxiety are likely to form the intention to learn and thus implement strategic behaviors to achieve this goal, as well as a number of other authors (such as Dőrnyei, 2001b; Pintrich & Schunk, 2002; Weiner, 1986, 1992) who claim that the learners who are aware that they have achieved the learning goal and make proper attributions for their success are more likely to sustain their high self-efficacy, positive attitude, and emotional climate for the following task performance in a cyclical manner (Tseng and Schmitt, 2008).

Tseng and Schmitt (2008) concluded that the mechanism of motivated vocabulary learning functions as a cyclic process, with motivation going through a series of different learning stages and not being just an "initial state" factor but an integral part of the whole system that drives the vocabulary learning cycle along.

5. Vocabulary knowledge

Vocabulary knowledge presents a multidimensional and complex construct (Read, 2000, as cited in Tseng and Schmitt, 2008).

Before defining vocabulary the problems in defining a "word" should be addressed. There is a problem in defining a 'word' because there are many formally different definitions which suggest the complexity of the problem. To solve the problem, a neutral term *lexeme* or *lexical unit* has been introduced and it represents an abstract unit that includes various orthographic, phonological, grammatical and semantic features of a 'word' which covers inflections, polysemy, multi-word items and idioms (Pavičić Takač, 2008).

Vocabulary could be defined as a set of words (Pavičić Takač, 2008) and refers mainly to single words and very tightly linked two- or three- word combinations (Scrivener, 2005). Pavičić Takač and Bagarić Medve (2013) define lexical competence as the knowledge of vocabulary. The characteristics of lexical competence include knowledge of orthographic and phonetic forms, knowledge of morphological structure, knowledge of syntactic characteristics, knowledge of the paradigmatic relations of the lexical structure, knowledge of the syntagmatic relations and knowledge of semantic characteristics (Pavičić Takač and Bagarić Medve, 2013). Some authors (Nation, 1990, as cited in Amirian et al., 2015) proposed three main dimensions of lexical competence which are further explained by nine components: form (spoken and written form, and word parts), meaning (form and meaning, concept and referents, and associations), and use (grammatical functions, collocations, and constraints on use). Based on Henriksen's model, Amirian et al. (2015) distinguished three most principal aspects of lexical knowledge: size (the average number of words a person knows), depth (the quality of their understanding and knowing various associations) and mastery (how well they are comprehended or actively produced) while Bogaards (2000, as cited in Amirian et al, 2015) has considered having six aspects: form (spoken and written), meaning, morphology (derivation and compounding), syntax, collocates, and discourse.

Færch et al. (1984, as cited in Pavičić Takač and Bagarić Medve, 2013) claim that a learner knows a particular word when the learner knows the full meaningful potential of the word, knows in which situations a word can be used, knows how words are related to other words and knows the relationships between words in the lexical framework. An ideal knowledge of the lexical unit would represent ability to react in the manner of educated adult native speakers but the knowledge of the lexical unit

cannot be regarded as “all-or-nothing” proposition. Therefore, applied linguists agree that the lexical knowledge represents stages on continuum varying from receptive or passive knowledge to productive or active knowledge. Receptive knowledge refers to recognizing words in reading or listening while productive knowledge presents the ability to recall words from memory in speech and writing and is smaller than receptive vocabulary. Complete knowledge of the lexical unit is very complex, it includes not only the knowledge of a large number of words but a multitude of mutually intertwined aspects. Pavičić Takač and Bagarić Medve (2013) have defined the vocabulary size or breadth as the number of words a learner knows and the vocabulary depth as the quality of the learner’s lexical knowledge and all the knowledge a learner has about a lexical unit. According to that, learners should learn enough lexical items to function in a language and learn them well enough to be able to use them appropriately in a variety of contexts (Tseng and Schmitt, 2008).

Laufer (1997, as cited in Pavičić Takač, 2008) determined the factors that affect the learnability of lexical items. They include pronounceability, orthography, length, morphology, inflectional and derivational complexity, similarity of lexical forms and grammar. First language may facilitate the acquisition, recalling or usage of second language lexical items or interfere with it. The memory also affects the learnability of lexical items and is crucial in vocabulary learning since it is not linear and learners forget some components of knowledge (Pavičić Takač, 2008). Given the complexity of vocabulary knowledge, it is reasonable to assume that the process of learning vocabulary might have its own complexities (Tseng and Schmitt, 2008). Thornbury (2002, as cited in Pavičić Takač, 2008) made a list of principles that facilitate the transfer of the learning material into the long-term memory. These principles include multiple encounters with a lexical item, retrieval and use of lexical items, cognitive depth, affective depth, personalization, imaging, use of mnemonics and conscious attention necessary to remember a lexical item. If teachers want to teach vocabulary effectively, the learning and teaching of vocabulary should be planned according to these principles (Pavičić Takač, 2008).

6. Review of related studies

To date, the self-regulation, especially in foreign language vocabulary learning has not been extensively researched. A recent study by Mizumoto and Takeuchi (2012, as cited in Bilican and Yesilbursa, 2015) was carried out with the SRCvoc scale in a Japanese EFL setting and suggested that the scale is a valid measure of self-regulation capacity in vocabulary learning in a Japanese EFL environment.

According to Bošnjak Terzić (2016) different studies (such as, Andrade and Evans, 2013; Gunning and Oxford, 2014; Ma and Oxford, 2014; Pintrich and DeGroor, 1990) proved positive correlation between self-regulation strategies and successful language learning. Seker (2016) revealed that, although learners reported moderate to low levels of self-regulation strategy use, self-regulation had significant correlation with language achievement and is regarded as a significant predictor of foreign language achievement. Zimmerman and Martinez-Pons (1986, as cited in Bošnjak Terzić, 2016) investigated the relationship between the usage of self-regulation strategies among secondary school learners and their English language achievement and revealed that the usage of self-regulation strategies correlates significantly with their level of achievement. Wong's study (2005, as cited in Bošnjak Terzić, 2016) showed positive correlation between self-regulation strategies, self-efficacy and achievement on English test.

Several studies have shown that self-regulation strategies lead to significant improvements in writing knowledge, writing quality, writing approach and motivation. A study by Santangelo et al. (2008, as cited in Fatemipour and Najafgholikhan, 2015) used self-regulation strategies to teach writing strategies to elementary, middle, and high school students and the results showed that self-regulation strategies had a significant positive effect on teaching writing skill. A different study by Graham et al. (2008, as cited in Fatemipour and Najafgholikhan, 2015) tested the effect of self-regulation strategies on the writing performance, knowledge, and self-efficacy of young writers and discovered that not only did the students write longer, more complete, and qualitatively better papers, but also increased their knowledge about writing.

Regarding self-regulation and vocabulary learning, the study conducted by Araya et al. (2013, as cited in Fatemipour and Najafgholikhan, 2015) revealed that providing self-regulatory training to students and making them aware of it, can be considered as the foundation for general learning and, specifically, learning vocabulary knowledge. Moreover, a study by Hamedi (2013, as cited in

Fatemipour and Najafgholikhan, 2015) investigated the relationship between self-efficacy and self-regulation in vocabulary learning of Iranian EFL learners and proved that self-efficacy, and self-regulated strategies are important concepts which can speed up the process of vocabulary learning. Zarei and Hatami (2012, as cited in Amirian et al., 2015) investigated the relationship of students' self-regulated learning competence, their vocabulary knowledge and reading comprehension. They found mixed results in the relationships of various self-regulated learning components and no significant relationship between self-regulated components and the vocabulary knowledge of the participants. Mizumoto (2013, as cited in Amirian et al., 2015) explored the effects of integrating a self-regulated learning approach on self-efficacy in vocabulary learning. The results confirmed a steady increase in the self-efficacy beliefs and vocabulary knowledge of the group which benefited from self-regulatory instruction which should help the learners become independent and autonomous in their vocabulary learning. Hardi (2014, as cited in Amirian et al., 2015) investigated learners' vocabulary learning strategies in the framework of self-regulation and proposed categories of learners' self-regulated vocabulary learning behavior and identified age-related differences in the use of such strategies. The results showed that young learners use various vocabulary learning strategies, are conscious of their endeavors while learning the words and use self-motivational and self-regulatory strategies efficiently. Fatemipour and Najafgholikhan (2015) revealed that self-regulated strategies have a significant positive impact on the vocabulary learning of Iranian intermediate EFL learners and that self-regulation strategies have the same impact on the vocabulary learning of males and female EFL learners. Onoda (2014, as cited in Bošnjak Terzić, 2016) revealed that perception of learners' self-efficacy influences the ability to learn foreign language vocabulary and predicts that the usage of self-regulation strategies influences speaking and listening skill in a foreign language.

7. The research

7.1. Aim and research questions

The main aim of the research is to investigate the relationship between learners' self-regulation capacity and their vocabulary knowledge and explore whether factors, such as learners' attitudes towards vocabulary learning, perception of difficulty of English or gender can play a role. It would be important to ask whether there is a relationship between self-regulation and vocabulary size because of the claims presenting self-regulation as a "significant predictor of foreign language achievement" (Seker, 2016:600) and question whether there is a relationship between learners' attitudes towards vocabulary learning and self-regulation due to the claims that learners draw on their previous learning attitudes and experience to build a growing repertoire of beliefs and strategies that enhance learning (Duckworth et al., 2009).

The research questions are as follows:

1) Is there a significant relationship between learners' self-regulation capacity in vocabulary learning and their vocabulary size?

2) Is there a significant relationship between learners' attitudes towards vocabulary learning and their vocabulary size?

3) Is there a significant relationship between learners' perception of difficulty of English and their self-regulation capacity?

4) Is there a significant difference in the mean self-regulation capacity for males and females?

7.2. Participants

A sample of 268 English language learners participated in the study conducted in Grammar school of Natural Sciences and Mathematics in Osijek, Grammar school Matija Antun Reljković in Vinkovci, and two primary schools (Tin Ujević and Grigor Vitez) in Osijek. There were 148 female and 110 male participants, however 10 participants did not state their gender. Moreover, 112 were primary school learners, 155 secondary school learners and 1 learner who did not state the grade. Among primary school learners there were 50 sixth graders, 62 eighth graders and among the

secondary school learners there were 21 learners in the first grade of secondary school, 88 in the second, 23 learners in the third and the fourth grade of secondary school, while one learner did not state the grade. Learners have learnt English on an average of 8 years (M=8.80, SD=2.17). Their average perception of difficulty of English is 2.37 (M=2.37, SD=0.93) which means they find the difficulty of English between easy and medium. The learners reported they like talking the most (M=3.98, SD=1.17) and learning the grammar the least (M=2.60, SD=1.15). They also like reading texts (M=3.85, SD=1.00), listening to texts (M=3.60, SD=1.19), learning new words (M=3.55, SD=1.05) and writing activities (M=3.19, SD=1.16). Among other activities, the learners mostly like watching films in English, listening to music in English and translating texts. Similarly, knowing how to talk is reported to be the most important aspect for the learners (M=4.69, SD=0.66) and knowing the grammar as the least important (M=3.98, SD=0.86). After talking, the learners regard listening comprehension as the next most important aspect (M=4.60, SD=0.68) then reading comprehension (M=4.51, SD=0.71), knowing lots of words (M=4.37, SD=0.75) and writing (M=4.34, M=0.76). Finally, the learners reported the grammar as the most difficult (M=3.21, SD=1.07) and understanding what is read as the easiest (M=4.23, SD=0.94) aspect of learning English. After grammar, the most difficult aspect is recalling a word (M=3.42, SD=1.01), writing essays (M=3.45, SD=1.08), writing a word correctly (M=3.61, SD=1.01), memorizing words (M=3.91, SD=0.95), speaking (M=3.93, SD=1.08), pronunciation (M=4.06, SD=0.94) and listening comprehension (M=4.09, SD=0.94).

7.3. Instruments

Two main instruments were employed in order to collect the data, all of them in the Croatian language. One of them is pencil-and-paper self-report questionnaire and the other is a test administered to the learners.

The first instrument was the questionnaire ‘Self-regulating capacity in vocabulary learning scale’ (SRCvoc) (see Appendix A) developed by Tseng et al. (2006). The questionnaire contained 20 items and participants had to make their responses on a seven-point Likert scale ranging from *1-strongly disagree* to *7-strongly agree* by circling the appropriate number on the scale for the option that expressed their personal vocabulary learning experience the best. These 20 items measured five facets of control: commitment, metacognitive, satiation, emotion and environment control. Each of the five facets in the scale included four items. Items 4, 7, 10, and 13 make up commitment control which

helps learners preserve and enhance their original goal commitment. Metacognitive control (items 5, 9, 11, and 16) assists the learners in monitoring their concentration and reducing any inhibiting factors. Satiation control (items 1, 8, 18 and 19) helps avoid boredom and adds interests to the task. Emotion control (items 2, 6, 12, and 15) is related to the management of emotional states or moods while environment control (items 3, 14, 17 and 20) helps the learner control negative environmental influences. The reliability of the scale, measured by Cronbach's Alpha was .795.

The second instrument was X-Lex: Swansea Vocabulary Levels Test (X-Lex) developed by Meara and Milton (2003) (see Appendix B). It is a test of vocabulary breadth and assesses how many words are known in a language. The learners were given an orthographic vocabulary recognition test. It tested 120 words, with 20 words randomly taken from each of the first five 1000 word frequency bands in English and 20 pseudo words. The learners were asked to tick the words they know from a selection of individually presented words. Twenty false words follow all the rules of word formation and sound combinations in the language and are designed to check on how reliable learners' claims are. They allow an estimate to be made of over-estimation on the part of the learners (Milton and Alexiou, 2010). Real words which are correctly recognized score 50 points, providing a basic score out of 5000 points. False words which are identified as real, result in a deduction of 250 points from the basic score allowing for a more accurate estimate of vocabulary size to be made (Milton and Alexiou, 2010).

A two-part demographic questionnaire (see Appendix C) was also administered to the learners. The first part consisted of questions addressing demographic information such as gender, class, years of learning and estimation of language difficulty. The second part consisted of 24 items followed by a five-point Likert scale. In the first six items, ranging from *1-do not like at all* to *5-like the best,* the learners had to make their responses by circling the appropriate number on the scale for the option that expressed how much they liked particular activities in English. In the following six items, ranging from *1-not important at all* to *5-the most important,* the learners had to mark their answers for the option that expressed how important particular aspect of language knowledge is to them. The last nine items, ranging from *1-the most difficult* to *5-the easiest,* elicited learners' estimation of difficulty of particular aspects of language. In the second part of the questionnaire learners could add other activities or aspects of language knowledge that were not offered and mark their responses.

7.4. Procedure

The data was gathered in 2016 during regular English classes. First, the researcher provided a brief explanation of the purpose of the research and informed the learners that their responses to the questionnaires were anonymous and would in no way affect their grades. Then, the researcher went through the necessary information and the instructions so that learners could understand what was expected of them before questionnaires were distributed to them. The learners were instructed to first fill out the demographic questionnaire, followed by the SRCvoc and then Swansea Vocabulary Levels Test (X-Lex). The learners needed approximately 20 minutes to complete the questionnaires and the test, although there was no time limit.

The collected data were entered into IBM SPSS Statistics software Version 20 for statistical analyses. It involved calculating the means and standard deviations for items in demographic questionnaire and SRCvoc. Pearson's correlation was administered to investigate the relationship between self-regulation capacity and learners' vocabulary size scores, relationship between learners' attitudes towards vocabulary learning and vocabulary size scores as well as relationship between learners' perception of difficulty of English and their self-regulation capacity. Independent-sample t-test was administered to investigate difference in the mean self-regulation capacity for males and females.

7.5. Results

The relationship between learners' self-regulation capacity in vocabulary learning and their vocabulary size scores was investigated using Pearson's product-moment correlation coefficient. The results indicate that there is no significant relationship between the two variables, r=-.031, p=.637.

Likewise, the results in Table 1. indicate, there is no significant relationship between individual self-regulation capacity facets and vocabulary size score.

Table 1. Descriptive Statistics and Results of Pearson Correlation Coefficient for Learners' Self-Regulation Capacity Facets in Vocabulary Learning and Vocabulary Size Score

	Vocabulary size score
Commitment control	.073
Metacognitive control	-.117
Satiation control	.019
Emotion control	-.038
Environment control	-.109

The results in Table 2. which show the relationship between learners' attitudes towards vocabulary learning and vocabulary size scores, indicate that there is a significant medium positive correlation between these variables, r=.320, p=.000. Moreover, the results show a significant small positive correlation between learners' attitudes towards vocabulary learning and facets of self-regulation.

Table 2. Results of Pearson Correlation Coefficient for Items of Learners' Attitudes towards Vocabulary Learning, Facets of Self-Regulation and Vocabulary Size Score

	Learners' attitudes towards vocabulary learning
Vocabulary size score	.320***
Commitment control	.294***
Metacognitive control	.227***
Satiation control	.298***
Emotion control	.125*
Environment control	.213***

*. Correlation is significant at the 0.05 level (2-tailed)
***. Correlation is significant at the 0.001 level (2-tailed)

The results in Table 3. indicate significant positive small correlation between vocabulary size score and learners' attitudes towards vocabulary learning consisting of following items: how much learners like learning new words, importance of knowing lots of words, difficulty of memorizing new words and difficulty of recalling a word.

Table 3. Results of Pearson Correlation Coefficient for Items of Learners' Attitudes towards Vocabulary Learning and Vocabulary Size Score

	Vocabulary size score
Learning new words	.266***
Knowing lots of words	.160**
Memorizing new words	.295***
Recalling a word	.219***

**. Correlation is significant at the 0.01 level (2-tailed).

***. Correlation is significant at the 0.001 level (2-tailed).

As the results in the Table 4. indicate, there is a significant medium negative correlation between learners' perception of difficulty of English and their vocabulary size score, r=-.338, p=.000. Results show a significant small negative correlation between learners' perception of difficulty of English and their commitment control, r=-.194, p=.002 and a significant small negative correlation between learners' perception of difficulty of English and their satiation control, r=-.195, p=.002. There is no significant relationship between learners' perception of difficulty of English and metacognitive, emotion and environment control.

Table 4. Results of Pearson Correlation Coefficient for Items of Learners' Perception of Difficulty, Self-regulation Capacity and Vocabulary Size Score

	Perception of difficulty
Vocabulary size score	-.338**
Commitment control	-.194**
Metacognitive control	-.021
Satiation control	-.195**
Emotion control	-.078
Environment control	-.015

***. Correlation is significant at the 0.01 level (2-tailed).*

Independent-samples t-test was conducted to compare the self-regulation capacity in vocabulary learning for males and females. The results in the Table 5. show that there is no significant difference in the mean self-regulation capacity for males (M=18.41, SD=3.95) and females (M=19.19, SD=3.46). Furthermore, as the results in Table 6. confirm, there are no significant differences in the mean values among neither of the individual facets of self-regulation capacity for males and females.

Table 5. Results of Independent-Samples T-test for Gender and Self-Regulation Capacity

	Gender	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Self-regulation capacity	Male	18.41	3.95			
	Female	19.19	3.46	-1.576	222	.116

Table 6. Results of Independent-Samples T-test for Gender and Individual Facets of Self-Regulation Capacity

	Gender	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Commitment control	Male	4.88	1.20			
	Female	5.10	1.09	-1.544	248	.124
Metacognitive control	Male	4.29	1.28			
	Female	4.36	1.22	-.436	245	.663
Satiation control	Male	4.13	1.17			
	Female	4.29	1.11	-1.083	251	.280
Emotion control	Male	4.12	1.08			
	Female	4.22	.95	-.737	245	.462
Environment control	Male	4.99	1.23			
	Female	5.33	1.18	-2.225	250	.027

7.6. Discussion

The findings suggest that there is no relationship between learners' self-regulation capacity in vocabulary learning and their vocabulary size scores. There is a tendency showing that the more self-regulation strategies learners use the lower their vocabulary score is, but it is not statistically significant. This may mean that learners' self-regulation capacity may not be a determining factor in vocabulary acquisition (Amirian et al., 2015). The reason behind it might be that learners do not know how to use self-regulation strategies or revert to using more familiar but ineffective strategies (Zumbrunn et al., 2011). The familiar strategies leave learners with a less effective means to their learning while new self-regulated strategies, which demand some time and effort to learn and practice them, would lead to meaningful learning and better results. Furthermore, the difficulties the learners encounter while learning new vocabulary might reduce their self-efficacy in vocabulary learning, reduce effective self-regulation strategies and cause lack of vocabulary knowledge (Ma Ping and Siraj, 2012). This finding is contrary to previous studies which have investigated the relationship between self-regulated learning strategies and learners' vocabulary knowledge. Mizumoto (2013, as cited in Amirian et al., 2015) confirmed that learners benefit from self-regulatory instruction, when integrating a self-regulated learning approach on self-efficacy in vocabulary learning, and helps them become independent in their vocabulary learning. This might explain the result since learners in this study were not instructed on the use and control of self-regulation. Fatemipour and Najafgholikhan (2015) revealed that self-regulated strategies have a significant positive impact on the vocabulary learning of Iranian intermediate EFL learners. The findings of a similar study by Araya et al. (2013, as cited in Fatemipour and Najafgholikhan, 2015) concluded that providing self-regulatory training to learners and making them aware of it is the foundation for vocabulary learning. However, some other studies, in which learners did not receive instruction on the usage of self-regulation, have revealed opposite results and showed that the correlations between the self-regulated vocabulary learning strategies and the vocabulary size of the participants were very small and negative. Zarei and Hatami (2012) found no significant relationship between self-regulated components and the vocabulary knowledge of their participants. Similarly, in Rezvani and Pourshahian's (2012) study the correlation between the vocabulary strategies and the vocabulary size of the participants were very small and negative. Amirian et al. (2015) list some authors (such as Jiang and Smith, 2009; Kojic-Sabo and Lightbown, 1999; Mizumoto, 2010; Nakamura, 2002; Nyikos and Fan, 2007) who stated that a number of factors, such as learning context, cultural differences, differences in the learners and their usage of vocabulary

learning strategies, might have contributed to these results. Amirian et al. (2015) add that the results could be like this due to the students' different backgrounds, different attitudes about vocabulary learning, different learning experience and different proficiency levels as well as the fact that students are still highly dependent on teachers' guidance and less self-directed in their learning process.

Moreover, the findings also suggest significant relationship between learners' attitudes towards vocabulary learning and vocabulary size scores (see Table 2. and Table 3.) It means the better the attitudes towards vocabulary learning learners have had, the better vocabulary size score. The better their attitudes towards vocabulary learning, the better self-regulation capacity in vocabulary learning. The results in Table 3. show that if the learners like learning new words, and find it important to know lots of words, the better their vocabulary size score will be and they will learn more words. Moreover, if learners find it easy to memorize or recall words the better vocabulary size score they will have. The reason for this could be that they invest more effort when learning new words if they have positive attitudes towards learning them and believe they can be successful. Learners who are aware that they have achieved learning goal and made proper attributions for their success are likely to maintain positive attitudes and emotions as well as high self-efficacy for future task performance (Tseng and Schmitt, 2008). Furthermore, self-regulation is considered to be improvable and influenced by experience and instruction (Winnie, 1996, as cited in Amirian et al., 2015). Learners' positive attitudes towards vocabulary learning will influence their motivation and learning experience.

The results in Table 4. show small negative correlation between learners' perception of difficulty of English and their self-regulation capacity. It means that if learners perceive English as very difficult, their self-regulation capacity will be lower and vice versa. The similar results are obtained when investigating learners' perception of difficulty of English and their vocabulary size score. The more English learning is perceived as difficult, the lower the vocabulary size score. This means that if learners perceive learning English vocabulary as very difficult they will know less words. This can be explained through academic self-efficacy which is considered to be central to learners' self-regulated belief system (Bandura and Locke, 2003, as cited in Ziegler, 2014) and which mediates academic performance cognitively, motivationally, and affectively (Chemers et al., 2001, as cited in Ziegler, 2014). The belief that one will succeed is important for perception of agency and motivation since the belief that ability increases through effort empowers learners they can learn any content using effective strategies (Weiner, 2005, as cited in Ziegler, 2014). Moreover, when learners are motivated

to learn, they are more likely to invest the time, energy and effort needed to learn and apply appropriate self-regulation learning skills (Zimmerman, 2000, as cited in Zumbrunn et al., 2011). Onoda (2014, as cited in Bošnjak Terzić, 2016) also states that the perception of self-efficacy influences the acquisition of second language vocabulary and predicts the usage of self-regulation strategies. However, if learners believe that they will not succeed or that the content is too difficult for them to learn they might become demotivated and passive, have low self-efficacy and invest less effort into trying to learn it.

Lastly, the results in Table 5. and Table 6. have shown that there is no significant difference in the mean self-regulation capacity in vocabulary learning and vocabulary size score for males and females which means that both males and females use same self-regulation strategies to the approximately same extent which leads to similar results on vocabulary test. Learners have achieved approximately the same result on Swansea Vocabulary Levels Test and have approximately the same vocabulary breadth. It is evident that both male and female learners mostly use environment control of self-regulation capacity, then commitment control, metacognitive control, satiation control and lastly emotion control which might be due to the similar instructions received from their teachers. Similar results were found by Fatemipour and Najafgholikhan (2015) who revealed that self-regulation strategies have the same impact on the vocabulary learning of male and female English foreign language learners. Therefore, gender appears not to be a determining factor in the usage of self-regulated vocabulary learning strategies.

8. Conclusion

There have been few studies in recent years on self-regulation capacity in vocabulary learning in which scholars have focused on various variables influencing self-regulated vocabulary learning and tried to reveal useful implications for teachers and learners. This research investigated the role of learners' self-regulation capacity on their vocabulary knowledge and whether any of the factors such as learners' attitudes towards vocabulary learning, perception of difficulty of English or gender influenced it.

The present study has shown that there was no relationship between the self-regulation capacity in vocabulary learning and vocabulary size scores but that there is a significant relationship between learners' attitudes towards vocabulary learning and vocabulary size scores. It can be seen that learners use self-regulation strategies but they do not contribute to their vocabulary knowledge in the same way as their attitudes towards vocabulary learning. Moreover, the results have shown that there was a significant small negative correlation between learners' perception of difficulty of English and their self-regulation capacity and no significant difference in the mean self-regulation capacity for males and females. The effectiveness of the self-regulation strategies did not depend on gender but on learners' perception of difficulty of English. All this could be an indicator that what is needed to improve learners' vocabulary self-regulation capacity is assuring positive vocabulary learning attitudes and encouraging them and showing them how to learn vocabulary that is perceived as very difficult. It would be useful to explore the reasons for such results and improve learners' self-regulation in vocabulary learning. Furthermore, more research is needed to investigate the relation between vocabulary learning and self-regulation capacity and to explain how the differences in the learners' self-regulation capacity may influence different aspects of vocabulary knowledge, such as learners' vocabulary size.

Due to some weaknesses of the research, some implications for future research can be derived. Learners complained that the items in SRCvoc did not coincide with their learning habits and that they did not use some of the strategies listed there or used others which were not stated. Moreover, the questionnaire employed in this research did not record what learners actually do while learning but what they reported they do while learning. It did not provide description of their individual self-regulated vocabulary learning strategies, when nor how they are applied. Some other instruments, such as writing a learning diary when learning new words or carrying out an interview, might be useful in future studies to help understand learners‘ self-regulated vocabulary learning strategies. Moreover,

in Swansea Vocabulary Levels Test the learners had to recognize the forms of the real words and we cannot know about learners' actual depth of lexical knowledge. Learner's vocabulary knowledge varies and this test which isolates vocabulary from other components of language and focuses on words as discrete, context-independent items does not allow for a detailed differentiation.

Regarding the teaching implications, learners should receive instruction on the use and control of self-regulation strategies in order to facilitate their learning. Language teachers should guide learners toward self-regulation, provide scaffolding in order to help students set goals and expectations, guide them through the learning process, and provide constructive feedback while encouraging reflection on learning outcomes (Boekaerts, 1997, as sited in Seker, 2016). Teachers should be familiar with the factors influencing learners' ability to self-regulate and understand that learners develop and learn at different paces and that different strategies do not work the same with different learners (Zumbrunn et al., 2011). It is necessary to provide enough time and opportunities for learners to learn and practice their new self-regulation strategies and adapt teaching so that it satisfies learners' needs and leads to positive learning attitudes.

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10. Appendices

10.1. Appendix A: Self-regulating capacity in vocabulary learning scale (SRCVOC)

Ovo je upitnik kojim želimo saznati kakva su tvoja iskustva u učenju riječi. Zanima nas tvoj osobni stav. Nema 'točnih' i 'netočnih' odgovora i ovaj upitnik neće utjecati na tvoju ocjenu pa te molimo da budeš iskren/a. Na ponuđenoj skali zaokruži samo jedan broj od 1 do 7 koji najbolje opisuje tvoj pristup učenju:

1	2	3	4	5	6	7
uopće se ne slažem	djelomično se ne slažem	ne slažem se	niti se slažem niti ne slažem	djelomično se slažem	slažem se	u potpunosti se slažem

1	Kada mi učenje riječi više ne predstavlja ništa novo, postajem nestrpljiv/a.	1	2	3	4	5	6	7
2	Znam kako smanjiti napetost kada sam pod stresom jer moram učiti riječi.	1	2	3	4	5	6	7
3	Pokušavam riješiti problem ako okolina u kojoj učim nije prikladna za učenje.	1	2	3	4	5	6	7
4	Za učenje riječi imam posebne načine učenja kako bih ispunio/la svoje ciljeve.	1	2	3	4	5	6	7
5	Za učenje riječi imam posebne načine za održavanje svoje koncentracije.	1	2	3	4	5	6	7
6	Zadovoljan/na sam načinima na koje smanjujem stres kada učim riječi.	1	2	3	4	5	6	7
7	Kada učim riječi vjerujem da mogu ispuniti ciljeve brže od očekivanog.	1	2	3	4	5	6	7
8	Zadovoljan/na sam načinom kojim smanjujem dosadu kada učim riječi.	1	2	3	4	5	6	7
9	Kada učim riječi smatram da su moji postupci kojima kontroliram koncentraciju učinkoviti.	1	2	3	4	5	6	7
10	Kada učim riječi ustrajem sve dok ne ispunim cilj koji sam si postavio/la.	1	2	3	4	5	6	7
11	Za učenje riječi imam svoje posebne postupke kojima sprječavam oklijevanje i odgađanje učenja.	1	2	3	4	5	6	7
12	Kada sam pod stresom jer moram učiti riječi jednostavno odustanem od učenja.	1	2	3	4	5	6	7
13	Smatram da mogu savladati sve probleme koji su vezni za postizanje mojih ciljeva u učenju riječi.	1	2	3	4	5	6	7
14	Kada učim riječi znam kako urediti svoju radnu okolinu kako bi mi učenje bilo učinkovitije.	1	2	3	4	5	6	7
15	Ako se osjećam nervozno zbog učenja riječi odmah rješavam taj problem.	1	2	3	4	5	6	7
16	Kada učim riječi smatram da su načini na koje kontroliram odgađanje učenja učinkovite.	1	2	3	4	5	6	7

17	Kada učim riječi svjestan/svjesna sam da je radna okolina važna.	1	2	3	4	5	6	7
18	Siguran/sigurna sam da mogu savladati dosadu za vrijeme učenja riječi.	1	2	3	4	5	6	7
19	Kada mi je dosadno dok učim riječi, znam kako mogu utjecati na svoje raspoloženje da poboljšam učenje.	1	2	3	4	5	6	7
20	Kad učim riječi, tražim dobro radno okruženje.	1	2	3	4	5	6	7

10.2. Appendix B: Swansea Vocabulary Levels Test (X-Lex)

Molimo te pažljivo pročitaj ove riječi. Neke su riječi prave engleske riječi a neke su izmišljene i ne postoje u engleskom jeziku. Označi kvačicom one riječi čije značenje znaš ili ih znaš upotrijebiti u rečenici.

Na primjer: dog ✓

fine		trunk		refer		woman	
boil		crisis		hyslop		cantileen	
round		humble		headlong		cardboard	
that		darrock		rake		everywhere	
normal		cliff		path		brighten	
lessen		limp		chart		deny	
feeling		publish		market		mercy	
gillen		pity		insult		gentle	
oak		essential		trick		table	
impress		juice		person		perform	
pedestrian		early		provide		contract	
frequid		weather		candlin		diamond	
reasonable		century		sweat		military	
daily		press		park		sumption	
gazard		jug		produce		horobin	
fade		before		with		sorrow	
effect		bullet		anxious		gumm	
wheel		tower		horozone		believe	
upward		antique		mount		arrive	
arrow		discuss		conduct		dish	
stand		instead		feeble		associate	
nod		dam		signal		slip	
group		probable		earn		whole	

drum		sandy		question		violent	
independent		stream		fishlock		outlet	
manage		pardoe		shot		hobrow	
difficult		permission		alden		litholect	
moreover		kennard		waygood		tube	
manomize		both		mud		teadaway	
relative		staircase		cup		feel	

10.3. Appendix C: Demographic questionnaire

Molimo te da čitko popuniš ovaj upitnik i da ne izostaviš niti jedno pitanje.

1. Šifra:_____ Spol (zaokruži): m – ž
2. Razred_____
3. S koliko godina si počeo/počela učiti engleski jezik? _____
4. Engleski je po tvom mišljenju (zaokruži):
   a) vrlo lagan b) lagan c) srednje težak d) težak e) vrlo težak

5. U kojoj mjeri voliš sljedeće zadatke iz engleskog jezika? Zaokruži ocjenu od 1 do 5:
   1-uopće ne volim 2-ne volim 3-ponekad volim 4-prilično volim 5-najviše volim

Čitati tekstove	1	2	3	4	5
Razgovarati	1	2	3	4	5
Učiti nove riječi	1	2	3	4	5
Pisati	1	2	3	4	5
Učiti gramatiku	1	2	3	4	5
Slušati tekstove	1	2	3	4	5
Nešto drugo - napiši što i ocijeni:	1	2	3	4	5

6. Koliko je tebi važno na engleskom jeziku ... (ocijeni ocjenom od 1 do 5):
   1-uopće mi nije važno 2-nije važno 3-pomalo važno 4-vrlo važno 5-najvažnije mi je

Znati gramatiku	1	2	3	4	5
Znati puno riječi	1	2	3	4	5
Razumjeti pročitane tekstove	1	2	3	4	5
Znati pisati	1	2	3	4	5
Razumjeti ono što čujemo	1	2	3	4	5
Znati razgovarati	1	2	3	4	5
Nešto drugo - napiši što i ocijeni:	1	2	3	4	5

7. Koliko je Tebi lako u engleskom jeziku (ocijeni ocjenom od 1-5):
   1-najteže 2-teško 3-lako 4-vrlo lako 5-najlakše mi je

Pisati sastave	1	2	3	4	5
Zapamtiti riječi	1	2	3	4	5
Govoriti	1	2	3	4	5
Sjetiti se riječi kad mi zatreba	1	2	3	4	5
Razumjeti što čitam	1	2	3	4	5
Pravilno napisati riječi	1	2	3	4	5
Gramatika	1	2	3	4	5
Razumjeti što slušam	1	2	3	4	5
Izgovarati riječi	1	2	3	4	5
Nešto drugo - napiši što i ocijeni:	1	2	3	4	5