DOCTORAL (PHD) DISSERTATION

THESIS BOOKLET

Szabina Ádámku

Developing Self-regulated Vocabulary Learning
in Hungarian Secondary-School EFL Education:
A Mixed Methods Study Among Learners and Teachers

2025

EÖTVÖS LORÁND UNIVERSITY

FACULTY OF EDUCATION AND PSYCHOLOGY

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Developing self-regulated vocabulary learning in Hungarian secondary-school EFL education: A mixed methods study among learners and teachers

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Budapest, 2025

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List of Acronyms

CALL	Computer Assisted Language Learning
CEFR	Common European Framework of References for Languages
CVA	Cognitive Vocabulary Approach
EFL	English as a foreign language
ELT	English language teaching
ERT	Emergency remote teaching
ICT	Information and Communication Technology
K-12	Students' elementary and secondary education
L1	First language (native language/mother tongue)
L2	Second language/foreign language
MALL	Mobile Assisted Language Learning
MSLQ	Motivated Strategies for Learning Questionnaire
SDL	Self-directed learning
SR	Self-regulation
SRCvoc	Self-Regulating Capacity in Vocabulary Learning
SRL	Self-regulated learning
SRVL	Self-regulated vocabulary learning
VL	Vocabulary learning
VLQ	Vocabulary Learning Questionnaire
VLS	Vocabulary learning strategies
VT	Vocabulary teaching
ZPD	Zone of Proximal Development

1 Introduction

The dissertation was inspired by several recent changes, for instance, (1) the technological advances that have recently provided an abundance of English as a foreign language (EFL) learning opportunities beyond classroom settings, bringing about the necessity of autonomous and self-regulated learning (Benson, 2013), (2) the emergency remote teaching (ERT) occurring during the COVID-19 pandemic creating the need for autonomy and self-regulation in academic processes (Carter et al., 2020), (3) the frontal nature and homework-heaviness of Hungarian secondary-school education which was the context of the research, and (4) the popularity of EFL, being the most commonly learnt foreign language in secondary-educational institutions (Central Statistical Office, 2024). Thus, strategic autonomous and self-regulated learning, as well as its pedagogical development has recently gained growing research attention; however, in the research context of this study, the processes, activities, and practices have not been comprehensively mapped, especially following the ERT period when learners faced learning situations that required self-organized conducts.

Therefore, the dissertation study aimed to investigate self-regulated learning activities among Hungarian secondary-school EFL learners within the crucial aspect of vocabulary knowledge expansion, the lack of which hinders communication (Folse, 2011; Ghazal, 2007). The research considered learners' self-regulated vocabulary learning (SRVL) mechanisms and their underlying factors, as well as their ERT experiences. Besides examining the learners' aspect, the study included Hungarian secondary-school EFL teachers' views and practices of their learners' SRVL development. The mixed methods design first applied quantitative questionnaire studies mapping the approaches and underlying factors of learners' SRVL, as well as teachers' facilitative approaches to promote such learning processes. Furthermore, both samples were asked about their related ERT experiences and perceived changes in their post-ERT SRVL conducts. The survey studies were followed by qualitative semi-structured interviews which allowed for deeper insights into the mechanisms, views, difficulties, and successful approaches in the research topics. Data was gained from 202 learner and 86 teacher respondents in the quantitative phase, while 12 learners and also 12 teachers were interviewed in the qualitative studies.

Although the samples do not allow for generalized interpretations, the research produced meaningful results that can contribute to the better understanding of the observed learning processes. Given the time of execution of this research, it provides insights into not

only secondary-school SRVL processes, but also views, cognitive, affective and motivational aspects of such learning in the context following demanding educational circumstances heavily loaded with self-managed learning. Based on the results, the dissertation is concluded with a proposed profile of a learner conducting good SRVL practices, as well as guidelines for the pedagogical development of such learning processes.

2 Literature Review

The study centered around the topics of autonomy, self-regulation, strategic vocabulary learning, and the emergency remote teaching with its effects on post-ERT classroom practices. The literature review was organized by the main topics, each section defining the key concepts and terminology, synthesizing theory and research in both the broad international research framework and Hungarian literature, and the conceptualization of the main aspects of my research through examining diverse empirical investigations of the overall topic, *strategic, self-regulated vocabulary learning*. Having revised the relevant literature, the study is placed into the research context, identifying the aims and rationale, and the research niche it may fill. In this thesis booklet, I summarize the literary background of the major concepts.

2.1 EFL Learner Autonomy and Self-Regulation

Learner autonomy and self-regulated learning share certain common characteristics (Dörnyei, 1998) as well as distinct features (Murray, 2014). In its essence, autonomy refers to the governance of oneself (Taylor, 2017). In the foreign-language (FL) learning context, it is "the ability to take charge of one's own learning" (Holec, 1981, p. 3), involving (1) goal-setting, (2) arranging the learning content and progression, (3) making choices of learning methods, (4) procedure monitoring, and (5) the evaluation of acquisition; moreover, application of all five constituents of learner autonomy to the highest extent culminates in self-directed learning (SDL). Beyond ability and capacity, it holds *control* (Benson, 2013), and while decisions are of the learners' responsibility, they require autonomy but not develop it by default (Smith, 2008). Therefore, the need arises for pedagogical attention towards the promotion of learner autonomy from psychological and practical points of view.

Self-regulated learning (SRL) entails "intentional learning activities that are not under a tutor's control, but under one's own direction" (Rheinberg et al., 2005, p. 503). In a more

specific description, it is “self-regulatory control that involves the use of strategies which are largely conscious processes that students apply to control their learning” (Kormos & Csizér, 2014, p. 279), containing *action* and being *goal-driven* (Oxford, 2017, p. 69). Crucial factors of self-regulated learning (SRL) are “the use of self-regulated learning strategies, self-efficacy perceptions of performance skill, and commitment to academic goals” (Zimmerman, 1990, p. 185). Zimmerman (2005) stated that the most crucial ability of human beings is to self-regulate and viewed SRL activities as “proactive processes that students use to acquire academic skill such as setting goals, selecting and deploying strategies, and self-monitoring one’s effectiveness, rather than a reactive event that happens due to impersonal forces” (Zimmerman, 2008, pp. 166-167).

Structurally, SRL is *cyclical*, containing three phases (Zimmerman, 2005, p. 16). The first is the *forethought* phase with goal-setting, strategy-formation, and self-motivation. In the second, *performance* phase, learners conduct their tasks while constantly monitoring their learning processes through volitional control. The last, *reflection* phase is a retrospective look at task achievement; as learners in this phase draw conclusions that affect later self-regulatory learning processes, the final phase not only completes the cycle but triggers regular SRL processes. Over all, self-regulation manifests in certain tasks, actions, and processes, the stages of which are described along two lines of the process, the first, observation—emulation—self-control, refers to the initial progress of SR, whereas the second, forethought—performance/volition control—reflection, describes the whole process, with emphasis on the cyclical nature of it (Zimmerman, 2005). Strategy use is decisive in the performance stage (Pintrich, 2005), while other important factors determine SR: cognitive components such as self-efficacy or goal setting, as well as affective elements, for instance, emotion or motivation.

Both learning processes require the use of strategies (Kormos & Csizér, 2014; Panadero & Alonso-Tapia, 2014) which are defined 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” (Oxford, 1990, p. 8). Oxford’s (1990, pp. 14-21), taxonomy established a categorization of language learning strategies into two main groups: *direct strategies* and *indirect strategies*. Within direct strategies, she identified *memory*, *cognitive*, and *compensation* strategies, while the category of indirect strategies composed of *metacognitive, affective*, and *social* strategies. The categories, as the author noted, could interconnect and be broad by nature; therefore, the taxonomy was intended to provide “a comprehensive structure for understanding strategies” (p. 22).

Theoretical and empirical studies highlight certain factors connected to autonomous and self-regulated learning. The study focused on motivation and self-efficacy, personal factors and beliefs. Motivation is an affective factor of learning (Józsa & Fejes, 2012) and plays a crucial role in self-regulation (Csizér, 2012; Dörnyei, 1998; Wolters, 2003). The dissertation cleared the concept of motivation along several definitions. In his socio-educational model, Gardner (1985, p. 10) described motivation as "the combination of effort plus desire to achieve the goal of learning the language"; that is, "the extent to which the individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity". Throughout the decades of motivation research, numerous categorizations have been established. Gardner (1985) distinguished between *instrumental orientation* in which the reason for learning is its pragmatic benefits, and *integrative motive* that entails the learner's interest in the community of L2 speakers that brings about active involvement. In a later study, Gardner and MacIntyre (1991) discovered that both types of motivation affected learning positively. Another common distinction in types of motivation is between extrinsic and intrinsic motivational drives. Ryan and Deci (2000, p. 60) explained that *extrinsic* motivation is present with the aim of "attain[ing] some separable outcome", while *intrinsic* motivation entails "the doing of an activity for its inherent satisfactions" or, in other words, for mere enjoyment. The authors further argued for a possible *orientation shift* when extrinsic motivation develops into intrinsic if an activity or task is interesting to the learners.

Drawing on the constructivist view which considers mental processes such as learners' beliefs, emotions and values, Dörnyei (1998, 2014) regarded motivation as a "process whereby a certain amount of instigation force arises, initiates action, and persists as long as no other force comes into play to weaken it and thereby terminate action, or until the planned outcome has been reached" (Dörnyei, 1998, p. 118). Developing the connections of motivation, cognitive and emotional attributes, Dörnyei (2014) generated the *L2 motivational self-system* which contains three categories of motivation: (1) the *ideal self* which reflects the learner's inner desire to grow into a certain linguistic persona, (2) the *ought-to self* that the learner assumes is desired of them in order to prevent unfavorable consequences, and (3) the *L2 learning experience* that entails the learner's drive deriving from the learning situation such as the community or the course itself. While the ideal self and the ought-to self reflect the intrinsic-extrinsic categorization, the L2 learning experience brings the novelty of motivational strategies applicable in ELT, for instance, motivating curricular and extracurricular learning material, assessment, as well as classroom environment.

The concept of another factor of SR, namely self-efficacy, has been developed in large by Bandura (1982; 2010) and is a fundamental contributor to SRL (Schunk & Ertmer, 2005). According to Bandura's (1982, p. 122) description, perceived self-efficacy involves „judgements of how well one can execute courses of action required to deal with prospective situation", and appropriate determination of one's capabilities could greatly influence functionality and performance. Increasing self-efficacy can also lead to greater intrinsic motivation and better academic results (Joo et al., 2000; Schunk & Ertmer, 2005; Zimmerman, 1990; 2008). Furthermore, perceived capabilities affect motivation for their operational processes (Bandura, 2010). While self-efficacy can be a part of personality (Matthews et al., 2005), it can also be strengthened or reinforced with previous successful achievements (Greene, 2018), or feedback (Schunk & Ertmer, 2005). According to Greene (2018), feedback from others assists learners in proper understanding of their past accomplishments, which increases self-efficacy and motivation.

2.2 Strategic, Self-Regulated Vocabulary Learning

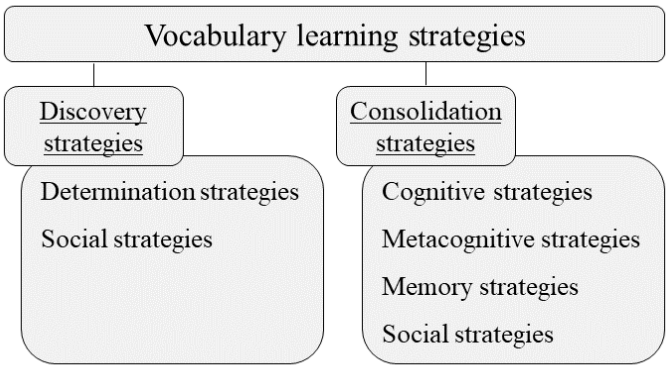
Within outside-class autonomous and self-regulated learning processes, the study focused on EFL vocabulary learning, a crucial aspect of foreign-language acquisition in the development of all skills (Webb & Nation, 2017). Vocabulary learning strategies involve (1) *planning*, whereby the vocabulary items, the desired knowledge, the appropriate strategies, and time management are specified, (2) *sources* that provide information about the target words, (3) *processes* for the foundation of word knowledge, and (4) *skill in use*, whereby knowledge is embedded into several linguistic skills (Nation, 2013, p. 328).

Schmitt (1997) developed his well-known taxonomy of vocabulary learning strategies (Figure 1) from Oxford's (1990) previously formed taxonomy for language learning strategies. The author employed Oxford's (1990) *social, memory, cognitive* and *metacognitive* strategies for vocabulary learning and placed them under the umbrella of *consolidation* strategies. In a new category of *discovery strategies*, he added *determination* strategies which are specific to vocabulary learning. He claimed that, besides interacting with others (social strategies), adding newly learnt words into the existing mental lexicon (memory strategies), the learner's adjustment to the target language (cognitive strategies), and exercising control over the learning process (metacognitive strategies), vocabulary learning required another strategic element, whereby learners use traces of their existing familiarity with the words in order to utilize the novel information about the targeted item and establish meaning in their understanding.

Moreover, under the term of discovery strategies, he placed *social strategies* again, as the discovery phase may include consultation with peers or people with more extensive knowledge.

Figure 1

Schmitt's (1997) Taxonomy of Vocabulary Learning Strategies

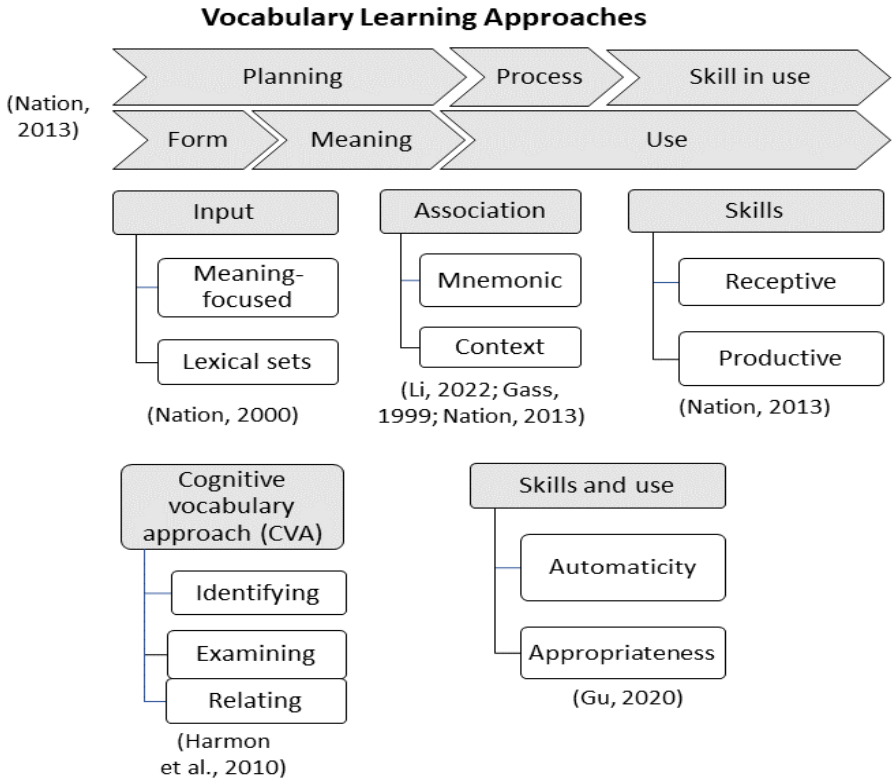


Vocabulary can be gained *incidentally* or *intentionally*, depending on the learner's attention and intention to commit the targeted items to their memory; or in *implicit* or *explicit* ways, being contingent upon the level of consciousness in acquisition (Dóczi & Kormos, 2016). Words can also be known in their breadth, that is the size of a person's vocabulary, in other words, the quantity of known items; or in their depth regarding knowledge of the various dimensions of a word (Dóczi & Kormos, 2016). Depth of vocabulary knowledge can be enhanced through, for instance, associative techniques; as Zhang and Lu's (2015) test results proved, such strategies focusing on form and association result in a considerably higher level of vocabulary knowledge than vocabulary expansion in its breadth which isolates vocabulary items.

In the application of vocabulary knowledge, learners use various skills: in listening or reading activities, *receptive* skills are applied to recognize words, whereas for speaking and writing, *productive* skills are utilized for generating proper forms of the selected vocabulary items (Nation, 2013; Webb & Nation, 2017). Gaining productive knowledge is more difficult for learners than improving receptive skills, because (1) learning words at the productive level demands more knowledge regarding output, (2) receptive skills are practiced to a higher extent, (3) the strong connection to L1 in receptive use as opposed to the several associations that learners make productively, and (4) the reduced motivation for applying knowledge in language production but present in receptive use (Nation, 2013).

Figure 2

A Visual Presentation of Vocabulary Learning Approaches



There are several ways of approaching strategic vocabulary learning (VL). In what follows, I highlight the main aspects of VL; however, Figure 2 provides an overview of VL approaches, which is thoroughly detailed in the dissertation. Nation (2013, pp. 131-138) outlined a comprehensive organization of VL practices through three main categories, namely form, meaning, and use, divided into subcategories with lists of several VL tasks supporting word-learning. Mnemonic approaches, in which remembering is helped by memorable association and connections, support vocabulary acquisition (Webb & Nation, 2017). Within this notion, one of the most well-known techniques is Atkinson's (1975) *keyword method*, according to which learning a new item can be approached through connecting it with an L1 word, and then imagery association may be created using the translation along with the associated keyword. Although the method has been challenged in later studies (Brown & Perry, 1991; Gu & Johnson, 2996; Levin et al., 1982), its potential is still considerable, and its features are often incorporated into approaches used today.

In associative processes, a popular approach to VL is the use of flash cards or word cards, used in hard-copy as well as digital forms (Webb & Nation, 2017). The approach employs

cards with vocabulary items on one side and some associational information such as *translation*, *core meaning*, *contextual sentences*, *keywords*, *images* or, in digital forms, even *audios* or *videos* on the flip side, in paired-associate approaches (Nakata, 2020, pp. 307-308). While the low level of difficulty and efficiency of placing a larger number of words into the long-term memory are advantageous, decontextualization and limited information attached to the items are considered as disadvantages of the word-card approach (Nation, 2013).

Successful vocabulary learning is dependent on the preliminary step of note-taking strategies (Folse, 2011; Ghazal, 2007). G*lossing*, within which learners provide information to the words, for example, their L1 translation, L2 synonym or brief explanation, or even images (Webb & Nation, 2017), is mainly conducted along reading activities (Nation, 2013) supporting both comprehension and VL. As Webb and Nation (2017) suggested, glosses might also be placed marginally in the learning material or hyperlinked in digital versions. Schmitt and Schmitt (1995) outlined a practical guide to keeping and effectively using a vocabulary notebook. Regarding the format, they suggested dynamic notebooks with changeable or moveable sheets, moreover, cards that can be kept in a box, catalogued and flexibly organized. For noting down new words, the authors emphasized word pairs, grouping words for easier acquisition, the use of translations or synonyms for quick revision, semantic mapping, drawings, or the addition of information such as word origin or frequent collocations. As for practice, they mentioned rehearsal, review and recycling by which they meant revisiting vocabulary items and adding information such as collocations, drawings or any other, yet unused method.

Other useful methods for note-taking and word association include the use of flash cards or mind maps. Nation (2013) compared the efficiency of vocabulary notebooks and word cards, concluding that the first entails more opportunities for recording abundant information about the vocabulary item than the latter which, however, is time-efficient both in the making and in gaining knowledge of words. A mind map, on the other hand, is "a visual tool that helps individuals organize and connect ideas, thoughts and concepts" (Wu & Zheng, 2023, p. 45). Wu and Zheng (2023) attributed its workability to its structure; while it is centralized around a major theme, nodes and branches distribute the connecting themes in a logical manner, boosting learners' creative thinking and memory.

Finally, the dissertation applied Tseng and colleagues' (2006) five 'control' scales created the 'Self-Regulating Capacity in Vocabulary Learning' (SRCvoc) questionnaire: *commitment control* (willpower to continue learning until the set goal is achieved), *metacognitive control* (keeping concentration and avoiding procrastination), *satiation control*

(overcoming boredom), *emotion control* (tackling unwanted emotions) and *environment control* (creating surroundings beneficial to studying). While the controls proved meaningful in the quantitative paradigm, this present study applied them in both the questionnaire and the interview phases, the latter inquiring about such SRVL mechanisms using qualitative measures.

2.3 The Role of Pedagogy in Developing Autonomous and Self-Regulated Learning

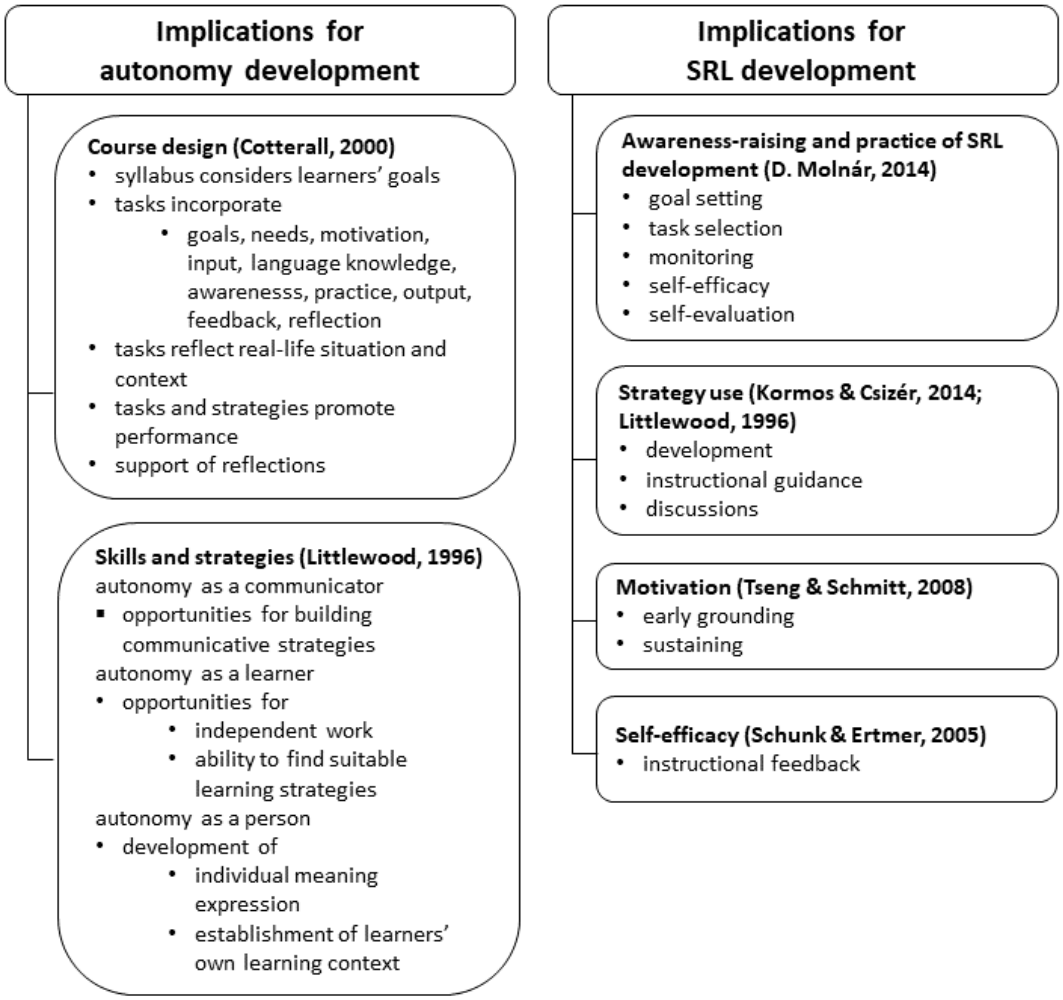
Self-regulated and autonomous learning may be enhanced by pedagogical development and the facilitation of strategies (Ghazal, 2007; Joo et al., 2000; Kormos & Csizér, 2014; Zimmerman, 2008); moreover, such educational focus can initiate SRL activities (Nagy & D. Molnár, 2017), develop self-regulated learning behavior (Lewis & Vialleton, 2011), and affect learning outcomes (Tseng et al., 2006). The dissertation details several notions of the crucial role of pedagogy in autonomous and self-regulated learning (Figure 3).

Cotterall (2000, p. 110) claimed that "language courses which aim to promote learner autonomy will incorporate means of transferring responsibility for aspects of the language learning process (such as setting goals, selecting learning strategies, and evaluating progress) from the teacher to the learner". She created five principals to augment autonomous learning: (1) the course syllabus ought to take learners' goals into consideration, (2) the tasks applied during the course should be in parallel with the 'simplified' model drawn by the author, including the steps of goals, needs, motivation, input, language knowledge and awareness, practice, output, feedback and reflection, (3) tasks used during the course should reflect real-life situation and contexts, (4) the utilization of tasks and strategies that are commonly acknowledged to promote performance, and (5) the course should be in support of reflection.

Littlewood's (1996) framework also outlined suggestions for successful pedagogical development of skills and strategies for enhanced learner autonomy. *Autonomy as a communicator* may be advanced by providing opportunities for building communicative strategies, as well as improving the ability of creative language use. *Autonomy as a learner* increases through opportunities for independent work and the ability to find suitable learning strategies. Lastly, FL-learning *autonomy as a person* increases by development of individual meaning expression and establishment of the learners' own learning context.

Figure 3

Implications in Literature for the Pedagogical Development of EFL Learner Autonomy and Self-Regulation



In a study focusing on self-regulation among underprivileged young learners, D. Molnár's (2014) educational development program aimed at awareness-raising and practice of aspects of self-regulation such as goal setting, task selection, monitoring, self-efficacy and self-evaluation. The results indicated remarkable improvement in the self-regulated learning of the experimental group due to pedagogical intervention, especially among poorly performing learners, while reduced self-regulation and demotivation was found in the control group. Regarding motivation, Tseng and Schmitt (2008) highlighted that it needs to be grounded early and then sustained throughout the learning process. In the context of Hungarian tertiary education, Kormos and Csizér (2014) found the correlation of motivation and autonomy,

between which self-regulation appeared as a mediator. In their pedagogical implications, the authors suggested more guidance for learners with regard to their learning strategies, time management, and they also urged discussions of learning opportunities. The other crucial factor of SRL, self-efficacy, can also be improved by pedagogical means through instructional feedback (Schunk & Ertmer, 2005) and, as learners' self-efficacy can result in better cognitive and affective strategy use, pedagogical attention to self-efficacy could be beneficial to all stakeholders of EFL education (Joo et al., 2000).

2.4 The Context of the Emergency Remote Teaching

The COVID-19 pandemic in 2020 suddenly moved classroom instruction to online platforms. In Hungary, this sudden shift happened over a weekend, forcing educators to rearrange their teaching plans to suit the new context. It is important to highlight that the occurring emergency remote teaching (ERT), is not equivalent with online teaching; an online course is created specifically to be held online (Hodges et al., 2020) with organized content and methodology, and the pedagogical and technological skills required from the instructor (Aristovnik et al., 2020). Further important factors are adequate learning environment, pace and tools, pedagogical, social and emotional support, and learners' self-reflection which requires self-monitoring abilities (Carter et al., 2020). The ERT, however, occurred as a sudden placement of originally face-to-face courses onto online platforms, necessitating creativity, adaptation and methodological shift from educators, and also demanding technological familiarity and skills for remote online education. As for learners, the ERT was an obligatory solution requiring approaches and management that might not have been a part of their previous practices (Karatas & Tuncer, 2020). The abrupt switch was challenging and demanding for all stakeholders and participants of education; nevertheless, it also provided opportunities for developing remote, online and self-regulated learning approaches, some of which are likely to remain in future educational activities. Furthermore, it raised the importance of SRL development (Carter et al., 2020).

2.5 Motivations of the Dissertation Study

Hungarian education, although more practical in foreign-language instruction, is rather frontal and homework assignment constitutes a great part of learning processes (Öveges & Csizér, 2018); however, regarding vocabulary learning, there is little diversity in learners' strategy use, and a large part of their VL approach contains rote learning vocabulary lists (Habók, 2016).

Furthermore, research findings (e.g., Csizér & Kormos, 2012; Habók, 2016) highlight the low levels of autonomous and self-regulated learning behavior and general preference towards memorizing strategies. Therefore, the main focus of this dissertation study was the self-regulated vocabulary learning mechanisms and practices at secondary-school level in Hungary. My research interest was further evoked by the digital availability of our time when autonomous and self-regulated learning can be supported by technology (Benson, 2013). In addition, the emergency remote education during the COVID-19 pandemic created a challenging setting in which certain levels of autonomy and self-regulation were necessary on the learners' side in order to fulfil their course requirements. However, learners' have reported higher proficiency in the use of digital availability for general purposes than for educational activities (Fekete, 2020b), which raised my intention to map Hungarian learners' self-managed learning conducts with relation to their ERT experiences.

In view of the above, the aim of this research was to uncover Hungarian secondary-school learners' autonomous and self-regulated vocabulary learning processes, together with pedagogical attention to their promotion and development. To date, I am unaware of a study that comprehensively researched autonomous and self-regulated learning with its underlying cognitive, affective, and motivational factors, as well as its control mechanisms in Hungarian secondary-school EFL education, especially in consideration with the ERT experiences that might relate to learners' current conducts. Although the sample size does not allow for generalizability, I hope my findings are constructive in pedagogical research for building practices that are beneficial for learners in today's SRVL practices, where foreign-language learning happens inside and beyond classroom settings.

3 Research Methods

The dissertation study intended to fill a research gap by mapping outside-class learning processes in a changed context and with several underlying factors; therefore, I applied the mixed methods approach (Table 1) which allowed for initially mapping the situation on large scales among learners and teachers with the help of questionnaires, followed by qualitative interviews to gain deeper understanding of the underlying reasons, ways and perceptions of SRVL both from learners' and educators' points of views. In this pursuit, I formulated the following main research questions (MainRQs):

- MainRQ1: How can Hungarian secondary-school EFL learners' outside-class self-regulated vocabulary learning practices and their development be described?
- MainRQ2: What are the underlying factors of Hungarian secondary-school outside-class self-regulated EFL vocabulary learning processes and their development?
- MainRQ3: What changes can be identified in Hungarian secondary-school outside-class self-regulated EFL vocabulary learning practices and in their promotion after experiences of the COVID-19-triggered emergency remote teaching?
- MainRQ4: What are Hungarian secondary school learners' and teachers' views and experiences of self-regulated vocabulary learning, and its development?

The first study (S1) investigated Hungarian secondary-school learners' SRVL attitudes, beliefs, related cognitive and affective factors, along with actual SRVL practices. Due to the fact that the learners' questionnaire study was disrupted by the COVID-19 pandemic, this phase was divided into two parts: a pre-ERT (S1A, $N = 82$) survey along 13 constructs (Appendix A) and a post-ERT (S1B, $N = 202$) questionnaire applying 19 constructs (Appendix B) including experiences and views of the ERT period regarding SRVL in that setting. Besides the learners, teachers of the research context were also surveyed in the quantitative paradigm (S2, $N = 86$) about their attitudes, beliefs, experiences, and activities concerning their learners' SRVL development and, for the reason that the teachers' questionnaire-study phase took place post-ERT, it involved constructs about ERT experiences (Appendix C). The constructs of the questionnaires contained five-point Likert-scale items. Based on the results of the first two studies, interview studies followed with learners (S3, $N = 12$) and teachers (S4, $N = 12$) to explore their views, ways of conducting and developing SRVL, as well as underlying reasons, causes, and motives behind SRVL and its promotion (for the themes emerging in the interview studies with learners and teachers, see Appendix D and Appendix E, respectively).

Data collection (Table 1) was realized via paper-and-pencil (S1A) and online (S1B, S2) questionnaires in the quantitative phase, and through semi-structured interviews in the qualitative part (S3 and S4) of the study. Quantitative analyses were conducted with the use of version 22 of the Statistical Package for Social Sciences (SPSS), starting with a reliability check followed by answering the research questions via frequency, independent samples t-test, one-way ANOVA, Pearson's correlation, and regression analyses. Regarding the qualitative data, I created verbatim transcriptions of the recordings, then the data was entered and analysed manually in Microsoft Excel via thematic content analysis.

Table 1

An Overview of the Studies, Their Aims, Methods of Data Collection and Analysis

Study	Aims	Methods of data collection	Methods of data analysis
Study 1A The Learners' Questionnaire (Pre-ERT)	To scrutinize Hungarian secondary-school learners' outside-class self-regulated vocabulary learning (SRVL) processes and their underlying factors.	Paper-and-pencil questionnaire	Statistical analyses (SPSS v. 22)
Study 1B The Learners' Questionnaire (Post-ERT)	To uncover Hungarian secondary-school learners' outside-class SRVL processes and their underlying affective, motivational, and cognitive factors after the ERT, and to investigate their ERT experiences.	Online questionnaire	Statistical analyses (SPSS v. 22)
Study 2 The Teachers' Questionnaire (Post-ERT)	To map Hungarian secondary-school teachers' SRVL-developmental processes and their underlying affective, motivational, and cognitive factors, as well as their ERT experiences and their possible effects on their pedagogical practices.	Online questionnaire	Statistical analyses (SPSS v. 22)
Study 3 The Learners' Interview (Post-ERT)	To find out about Hungarian secondary-school learners' SRVL activities, as well as views, beliefs and reasons behind these processes.	Semi-structured interviews	Thematic content analysis (manual coding in Microsoft Excel)
Study 4 The Teachers' Interview (Post-ERT)	To explore Hungarian secondary-school teachers' SRVL-developmental activities, as well as views, beliefs and reasons behind these processes.	Semi-structured interviews	Thematic content analysis (manual coding in Microsoft Excel)

The research presented in the dissertation concerned a number of ethical issues to consider. As the research context of Hungarian secondary-school education involved institutional access, and a large part of the sample were minors, I gained informed passive or active consents from the participants. Participants of all distributional stages were thoroughly informed about the main topic and aims of the study, the researcher being the only person with

access to the data, anonymity, voluntary participation and the respondents' right to withdraw from the study (Dörnyei, 2007). Data ownership manifested as promised in the informed consents: I was the only person receiving, handling, and processing the collected data (Dörnyei, 2007). In all stages of the dissertation research, reporting the data also followed ethical protocols of avoiding possible identification of any participants in their institutional affiliation, regional information or names; regarding such traceable demographic data, only types of institutions and larger regions were collected, and respondents were referred to by pseudonyms.

The research underwent several steps of quality control measures. Design validity was justified in the aims a rationale of this investigation: while previous studies examined aspects of self-regulated learning, even with focus on VL, no comprehensive study has been conducted measuring SRVL with their underlying factors and control mechanisms, especially following the SRL-demanding emergency remote teaching (ERT) arrangement in 2020, occurring due to the COVID-19 pandemic. The quantitative survey tools were compiled in consideration of creating reliable and valid instruments. Furthermore, confidential data handling was intended to prevent response bias or the Hawthorne effect, and the respondents were kindly invited to provide true and honest answers. Moreover, they were informed that the survey was not a test with right or wrong responses, which was aimed to eliminate learners' attempts to meet the researcher's expectations (Dörnyei, 2007). The reliability of the quantitative questionnaire data was checked by testing the Cronbach's alpha values of the constructs, whereby the minimally accepted value was established at .6, but aims were set to achieve a more trustworthy rate of .7 (Creswell & Creswell, 2018; Dörnyei & Csizér, 2012). Construct validity was assured with reporting and interpreting the data through answering the research questions, allowing for making objective and truthful conclusions, related and contrasted with previously established theories and research results (Dörnyei, 2007). Although the sample size does not allow for generalization of the data to the population of the study, internal validity was realized in meaningful interpretations for the scrutinized context, while the research tools are ready for replication or larger-scale investigations in a broader research context.

The qualitative, semi-structured interview protocols collected general demographic data, a warm-up question that related to the topic in a broader sense, and preliminary questions along the predetermined themes with optional follow-up inquiries (Creswell & Creswell, 2018). I transcribed and then reviewed the recorded data, the dependability (Dörnyei, 2007) of which was assured by coding and recoding, followed by intra- and inter-rater consistency analyses, the latter involving a fellow researcher via debriefing (Creswell & Creswell, 2018) and coding

10 percent of the dataset in both consistency checks. In reporting the outcomes, thick description was applied in order to achieve internal generalizability (Dörnyei, 2007), while evaluating the determined existing and emerging themes against the research context provides opportunities for transferability.

4 An Overview of the Main Results

The study produced several meaningful results to better understand Hungarian secondary-school learners' SRVL processes as well as the pedagogical aspects of facilitating and promoting such learning activities. The main research questions investigated (1) the extent of SRVL and its facilitation, (2) the underlying factors of SRVL, (3) perceived changes in SRVL due to the ERT and their relations to post-ERT SRVL processes, and (4) the learners' and teachers' views, experiences, and reasons behind SRVL development. In what follows, I synthesize the main findings of the dissertation study.

4.1 Outside-Class SRVL Practices and Their Pedagogical Development

The study brought about low levels of SRVL activities (Figure 4) in both their note-taking (M = 2.49, SD = .89) and VL activities (M = 2.56, SD = .69). However, they exercised better control of their learning processes. They best controlled their commitment (M = 3.76, SD = .80) and negative emotions (M = 3.73, SD = .80), and they felt relatively competent at regulating their environment (M = 3.53, SD = .82). The least well-governed areas were satiation (M = 3.47, SD = .97) and metacognition (M = 3.43, SD = .89), indicating a need to increase learners' skills in overcoming boredom and maintaining their concentration. The fact that the means of these scales were still above average, as opposed to their SRVL conducts, indicates that they are able to arrange their learning activities but do not possess various learning strategies to establish their vocabulary knowledge.

As seen in Table 2, numerous significant and interesting correlations surfaced within the underlying factors of SRVL. For instance, motivation corresponded moderately with self-efficacy (r = .41, p < .001) and self-initiation (r = .42, p < .001), while weakly with methods belief (r = .22, p = .002) and very weakly with importance belief (r = .17, p = .019). These results indicate that learners who are motivated to conduct SRVL feel the capability for it, initiate actions, and believe in the use of varied strategies. Another interesting outcome is the

strong correlation found between the learners' VL memory strategies and note-taking strategies (r = .65, p < .001), proving the importance of efficient note-taking as a supportive step towards successful self-regulated vocabulary learning.

Figure 4

A Diagram Representation of Learners' SRVL Mechanisms in Study 1B

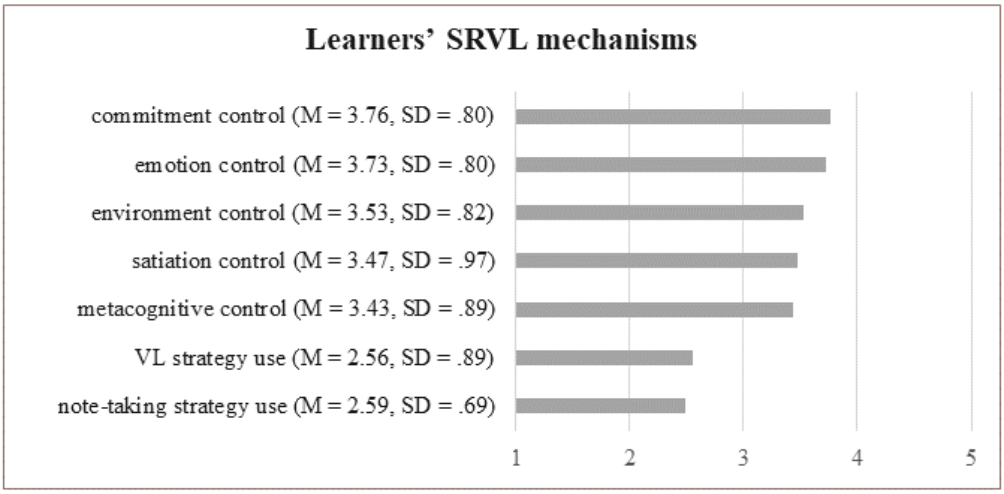


Table 2

Correlations of Underlying Factors and Strategy Use in Study 1B

Scale	1	2	3	4	5	6	7
1. motivation	-						
2. self-efficacy	.41***	-					
3. self-initiation	.42***	.33***	-				
4. importance belief	.18*	-.05	-.02	-			
5. aptitude belief	.01	-.56	-.08	-.03	-		
6. methods belief	.22**	.08	.05	.05	.07	-	
7. note-taking strategies	.24**	-.18*	.04	.08	-.01	.01	-
8. VL strategies	.15*	-.18*	-.03	-.06	-.07	.30***	.65***

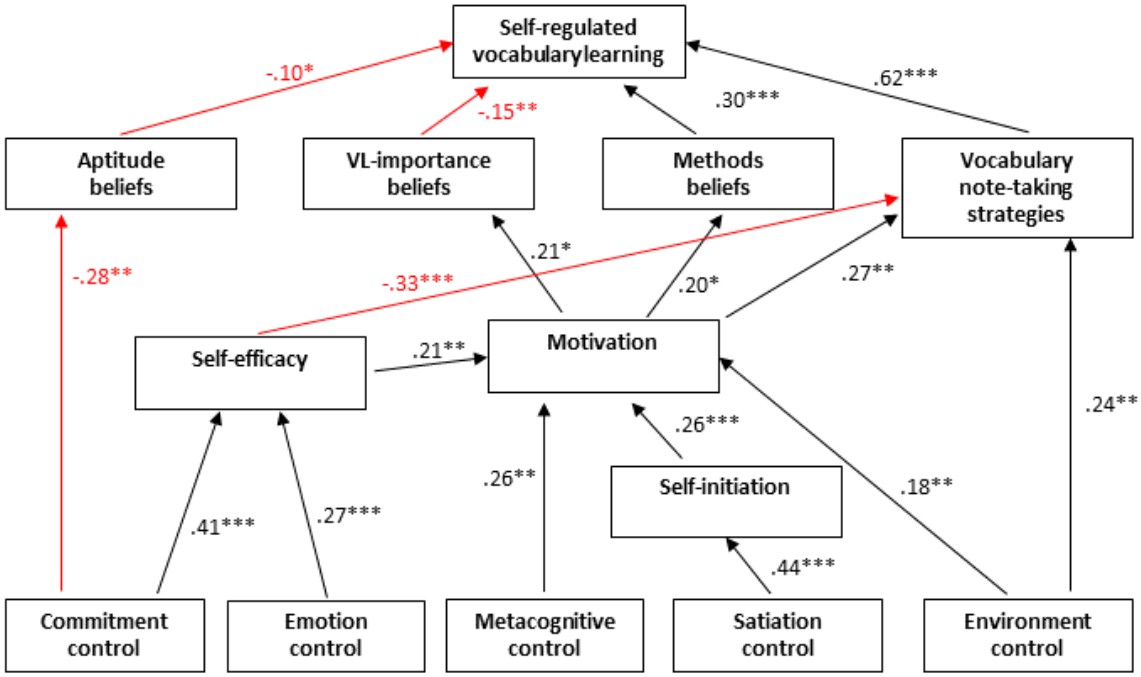
*p < .05. **p < .01. ***p < .001.

The research found several causal effects between factors of SRVL and actual strategy use, following which a multiple linear regression path model of the entire process was formed (Figure 5). Tseng and colleagues' (2006) control mechanisms proved to be the foundation of these learning procedures, triggering self-initiation, self-efficacy and motivation. These findings echo with those of Ziegler's (2015), according to which control elements are decisive

for motivational aspects of SRL, especially in the performance phase. Then the learners form their beliefs and build note-taking strategies, which together lead to successful SRVL. It also came to light that commitment control negatively affected beliefs about aptitude, eliminating assumptions that vocabulary learning is dependent upon innate capabilities (Singleton, 2017); instead, the results in this study show that the willpower to achieve VL goals overwrites aptitude beliefs (Zimmerman, 2008). Beliefs about the importance of VL also negatively impacted SRVL, implying pressure and perhaps anxiety attached to the theme. In other words, the more attention is drawn towards how important vocabulary knowledge is, the more challenging it seems and, therefore, less strategic vocabulary learning will take place. Alternatively, focus should be shifted to learners' conceptions about VL approaches; according to the regression model, beliefs about the application of suitable methods and conducting note-taking strategies are direct positive predictors of strategic VL. Consequently, strategy development is key to self-regulation in vocabulary acquisition and learning (Schmitt, 1997), and underlying factors, such as motivation, control processes, or beliefs, determine its quality (Tseng & Schmitt, 2008).

Figure 5

The Regression Path Model of Learners' SRVL



*p < .05. **p < .01. ***p < .001.

The learners' interviews in Study 3 produced several meaningful findings along ten themes (Appendix D). The respondents mostly reported on interest and willingness in learning new vocabulary. Almost half of the sample found their vocabulary knowledge adequate for their EFL purposes; their experiences, however, were diverse both in classroom VL experiences and outside-class SRVL activities. They found VL important, resonating with Folse's (2011) and Ghazal's (2007) views on words being crucial to form meaning and express oneself. The learners' motivation reflected their interest, arranging into Dörnyei's (2014) L2 motivation system categorization; motivation realized in curiosity for new words (L2 learning experience), or aiming to gain knowledge and skills for real-life (ideal self) or instrumental communicative and comprehension purposes (ought-to self), which are realistic and practical goals that set grounds for meaningful and devoted learning (Habók et al., 2019). These goals also set directions in pedagogy towards a classroom atmosphere that supports and provides sufficient expression and practice (Cotterall, 2000). Regarding SRVL frequency, however, six respondents disclosed irregularity due to their learning purposes being for tests, which can be interpreted as an ought-to self (Dörnyei, 2014) or rather extrinsic (Ryan & Deci, 2000) motivation which, as Young (2005) explained, does not result in meaningful strategic learning.

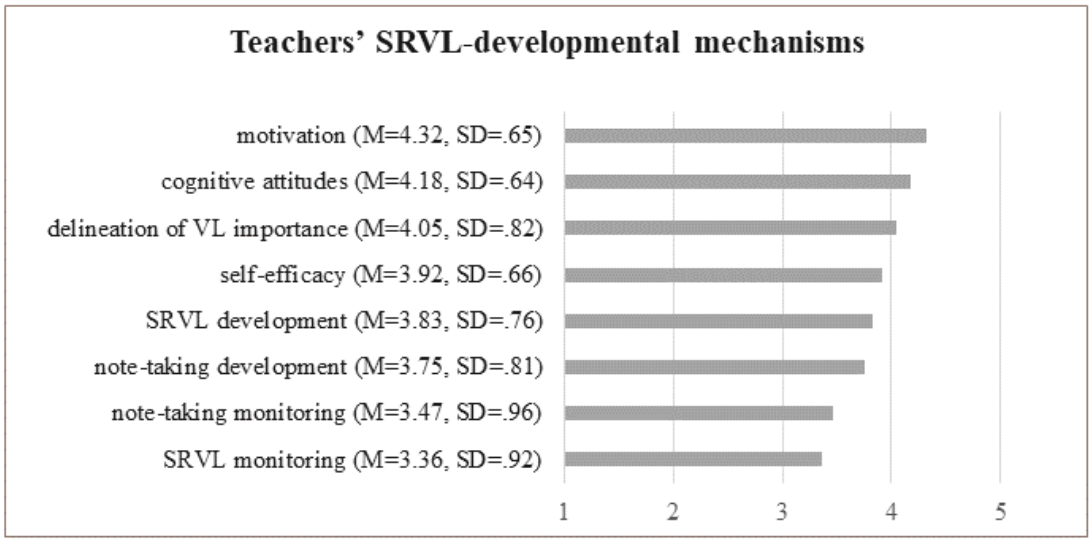
The participants commonly used (1) cognitive strategies involving rote-learning, (2) memory strategies such as mnemonic associative learning (Atkinson, 1975; Webb & Nation, 2017), repetition, and sentence making (3) metacognitive strategies to manage their learning and maintain their concentration (4) determination strategies through reading or the use of multimedia sources, and (5) consolidation-social strategies (Schmitt, 1997) that involved a peer, relative, or other acquaintances to test their knowledge, or practicing their existing vocabulary knowledge in communicative situations (Adamku, 2022; Schmitt, 1997; Tseng et al., 2006).Their note-taking was metacognitive through means of color-coding or spatial regulation. Note-taking strategies manifested in paring their target items with L1 translation, L2 definition, or context. Based on some respondents' positive outcomes of rote-learning from L1-L2 lists, which corresponds with Liu's (2008) findings, L1 matching can be a simple, time- and space-efficient way for noting down vocabulary. Interestingly, learners experimented with digital VL tools; nevertheless, the data reveals that they did not necessarily approve of digital VL; regarding this category, more participants were dissatisfied with this learning approach than those being content with their efficiency. This outcome contrasts Aravind and Rajasekaran's (2020) findings on learners' preference of multimedia approaches in their outside-class vocabulary learning processes. Finally, Tseng and colleagues' (2006) SRCvoc control scales

were examined in the qualitative phase, with mixed results. While they exercised certain control through strategies such as taking breaks, persistence, temporal regulation, or reaching contentment with their achievements so far, some responses revealed giving up or abandoning control over SRVL activities.

From the pedagogical point of view, teachers reported higher SRVL-developmental activities (Figure 6) than actual SRVL activities in the learners' questionnaire study, which implies that strategy instruction is a part of classroom teaching practices; nevertheless, learners do not utilize diverse strategies in their own learning. The teachers concentrated more on actual SRVL developmental techniques (*M* = 3.83, *SD* = .76), rather than monitoring the learners' progress in their outside-class VL activities (*M* = 3.36, *SD* = .92). The same tendency was unveiled with regard to note-taking strategies: the teachers' developmental practices were more present (*M* = 3.75, *SD* = .81) than monitoring learners' vocabulary notes (*M* = 3.36, *SD* = .92).

Figure 6

A Diagram Representation of Teachers' SRVL-Developmental Mechanisms



The teacher-respondents' motivation (*M* = 4.32, *SD* = .65), self-efficacy (*M* = 3.92, *SD* = .66), and cognitive attitudes (*M* = 4.18, *SD* = .64) regarding SRVL development were at high levels, as well as their promotional activities through delineation of VL importance to their learners (*M* = 4.05, *SD* = .82); these outcomes indicate the participating Hungarian EFL instructors' sufficient attention to the promotion of SRVL among their learners. The inquiry also viewed the constructs of cognitive attitudes, self-efficacy and motivation in relation to the teachers' SRVL developmental activities. The correlation analyses produced all significant

results (Table 3). SRVL development correlated moderately with the teachers' cognitive attitudes ($r = .55$, $p < .001$), strongly with both motivation ($r = .67$, $p < .001$) and self-efficacy ($r = .71$, $p < .001$). This suggests that teachers who feel capable and are motivated to develop SRVL and, to a certain extent, believe in such development and its opportunities, put more effort into actual development. The other developmental scale, that of improving learners' note-taking strategies correlated weakly with motivation ($r = .38$, $p < .001$), while moderately with teachers' cognitive attitudes ($r = .42$, $p < .001$) and self-efficacy ($r = .54$, $p < .001$). Although not part of the analysis, the correlation results showed further noteworthy relations; with all connections being significant, an interconnectivity of all scales can be observed.

Table 3

Correlations of Teachers' SRVL-Developmental Activities and Their Underlying Factors

Scale	1	2	3	4	5	6	7
1. cognitive attitudes	-						
2. self-efficacy	.70***	-					
3. SRVL development	.55***	.71***	-				
4. note-taking dev.	.42***	.54***	.60***	-			
5. note-taking monitoring	.31**	.40***	.57***	.62***	-		
6. SRVL monitoring	.43***	.55***	.59***	.55***	.66***	-	
7. motivation	.55***	.64***	.67***	.38***	.37***	.55***	-
8. importance delineation	.44***	.55***	.65***	.58***	.54***	.55***	.58***

*p <. 05. **p < .01. ***p < .001.

Out of the three main underlying factors, significantly two impacted the teachers' SRVL-developmental activities ($R^2 = .58$, $F(3, 82) = 37.19$, $p < .001$): weakly that of motivation ($\beta = .35$, $p < .001$) and moderately that of self-efficacy ($\beta = .45$; $p < .001$). The third factor, cognitive attitudes did not show a significant effect. The results (Table 4) can be viewed positively considering the natures of the factors; motivation being an inner drive and self-efficacy containing beliefs about one's own capabilities, these factors originate within the individual. On the contrary, the items in cognitive attitudes were related to possibilities and opportunities for SRVL development, which concern perceived external circumstances, not having an influence on the teachers' SRVL-developmental activities.

Table 4

Regression Coefficients of Underlying SRVL-Developmental Factors Predicting SRVL Development

Scale	*B*	*SE*	*β*	*t*	*p*	*95% CI*
Constant	-.18	.41		-.45	.658	[-1.01, .64]
motivation	.41	.11	.35	3.71	<.001	[.19, .64]
self-efficacy	.52	.13	.45	4.04	<.001	[.26, .77]
cognitive attitudes	.05	.12	.04	.37	.712	[-.20, .29]

Note. Dependent scale: SRVL development.
CI = confidence interval.
R^2 = .58, $F(3, 82) = 37.19$, $p < .001$

The teachers' interviews disclosed valuable information about their beliefs, views, and conducts in their learners' SRVL development (Appendix E). Most importantly, vocabulary-teaching approach beliefs revealed considerations of (1) executive functions involving skills development, transcendency across fields, and catering for group-level needs, (2) methods that maintain learners' interest (Dörnyei & Csizér, 1998), facilitate individual needs, and provide bases for SRVL and spaced repetition (Folse, 2011), and (3) teachers' own affection to VT deriving from their previous FL learning experiences. However, the respondents mentioned several difficulties in their teaching practices originating from learners' low level of effort which is a construct of motivation (Gardner, 1985; Williams & Burden, 1997). The teachers were more in support of incidental VL than strategic means, but those in favor of SRVL, however, reasoned their beliefs in its importance with (1) the pace of the curriculum that requires supplementary learning in order to reach specific learning goals, (2) the fact that strategy building helps moving vocabulary items into the long-term memory. Thus, goal setting and strategy instruction are essential in instruction (Moir & Nation, 2002).

The teachers' SRVL development realized in note-taking strategy development as well as strategy-instruction for SRVL. Although vocabulary note-taking strategies (VNTS) were not frequently monitored, teachers made observations of their learners' VNTS which manifested in vocabulary lists, textbook notes, and metacognitive organization of spatial distribution or color-coding. The most common pedagogical approach to VNTS, however, was L2-L1 vocabulary lists either in printed or digital word-card application forms. Educational development of SRVL manifested to a lesser extent in monitoring these learning processes, but rather in strategy instruction with high perceived efficiency.

Cognitive strategies received the most pedagogical attention, mainly through the introduction of digital MALL learning opportunities, which provide metacognitive elements via built-in VL strategies, enhancing learner autonomy (Pratiwi & Waluvo, 2023) and self-regulation (Boroughani et al., 2023), focusing on learning words in word families (Nation, 2013), or with their definitions, the latter aiming at monolingual association, nevertheless, its zero-context condition may limit efficiency (Zarfsaz & Yeganehpour, 2021). Discussing strategy-use in the EFL classroom was exercised by some participants of this study for establishing metacognitive strategies related to control over the study load of the number of target items, or increased efficiency in time management. Additional strategy instruction focused on social strategies (Oxford, 1990) mainly in the consolidation paradigm (Schmitt, 1997), either in organized digital or on-site peer-practice, or suggestions of outside-class peer-supportive learning and peer-assessment. Some teachers highlighted their concerns with differentiation within vocabulary teaching; while certain techniques were mentioned, they felt lack of attention to the growing individual and special needs of learners both in their previous training and their opportunities in their current practices.

4.2 Changes in SRVL and its Development Due to the ERT

While teachers felt that they placed more emphasis on SRVL development after educational settings were moved outside class into homes, learners did not perceive substantial changes in their SRVL. This might be explained by the general unfamiliarity of the suddenly applied platforms (Aristovnik et al., 2020) which caused difficulties for teachers (Kóródi et al., 2020) and learners (Fekete, 2020b) alike. However, the correlation analyses provide better understanding of how such situations heavily loaded with the necessity for self-managed learning relate to future SRVL mechanisms. For instance, if learners' beliefs in the importance of SRVL changed in ERT and they observed more digital opportunities, they are likely to be more motivated and self-initiative in their later SRVL processes ($r = .21$, $p = .004$). Furthermore, if they perceived changes in their motivation for SRVL due to the ERT, they later believed more in the efficiency of SRVL strategies ($r = .19$, $p = .006$); per contra, their self-efficacy lowered ($r = -.28$, $p < .001$), which can be explained with a realization in their distance learning that they lacked SRVL approaches. Those who noticed more pedagogical attention to SRVL enhancement felt more self-initiative ($r = .15$, $p = .031$), which outcome aligns with Nagy and D. Molnár's (2017) claim that self-regulation can be originated from the teacher. The two tables

below (Table 5 and Table 6) present the comprehensive correlation analysis with several further relations scrutinized in the dissertation.

Table 5

Correlations Between Perceived ERT Changes and Post-ERT SRVL Beliefs

Scale	1	2	3	4	5	6	7
1. importance belief	-						
2. aptitude belief	-.03	-					
3. methods belief	.05	.07	-				
4. importance change (ERT)	.24	.03	.19**	-			
5. access/availability (ERT)	.06	.04	.13	.42***	-		
6. motivation change (ERT)	.11	.11	.17*	.70***	.55***	-	
7. pedagogical dev. (ERT)	-.04	.09	.00	.33***	.42***	.39***	-
8. SRVL change (ERT)	.15*	-.02	.17*	.73***	.65***	.72***	.40***

*p <. 05. **p < .01. ***p < .001.

Table 6

Correlations Between Perceived ERT Changes and Post-ERT Affective Factors of SRVL

Scale	1	2	3	4	5	6	7
1. motivation	-						
2. self-efficacy	.41***	-					
3. self-initiation	.42***	.33***	-				
4. importance change (ERT)	.21**	-.14	.20**	-			
5. access/availability (ERT)	.21**	.02	.15*	.42***	-		
6. motivation change (ERT)	.13	-.28***	.07	.70***	.55***	-	
7. pedagogical dev. (ERT)	.14	-.08	.15*	.33***	.42***	.39***	-
8. SRVL change (ERT)	.20**	-.08	.15*	.73***	.65***	.72***	.40***

*p <. 05. **p < .01. ***p < .001.

5 Pedagogical, Theoretical, and Practical Implications

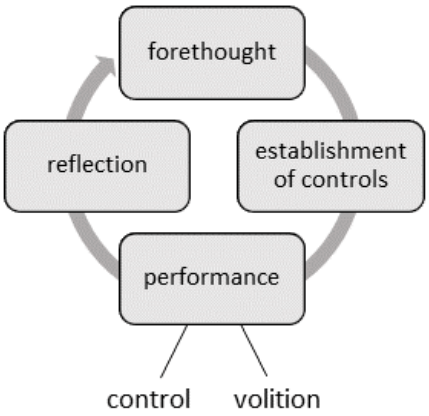
The first and foremost outcome is that Hungarian secondary-school learners did not engage in self-regulated VL to a great extent, relying instead on rote memorization for tests. While rote-learning can produce positive results in VL (Liu, 2008), the learning process detected in this study can be characterized with less motivational L2 learning experiences (Dörnyei, 2014). As motivation is a key factor of SRVL leading to increased vocabulary knowledge (Tseng &

Schmitt, 2008), it is of utmost importance in pedagogy to raise and maintain learners' motivation. Moreover, with the connection found between perceived pedagogical promotion of SRVL in the ERT and later self-initiation of the learners, the study confirmed that SRL is in a great part initiated by the teacher (Nagy & D. Molnár, 2014). These pedagogical activities, therefore, need to be strengthened both in teacher training and in curriculum planning.

While many outcomes of this dissertation study align with previous research findings, some of them challenge existing theories. The importance of control mechanisms is highlighted in literature (Rose, 2012; Tseng et al., 2006; Ziegler, 2015), but this dissertation study proved their fundamental function in self-regulated vocabulary-learning processes (Figure 12), implying that control not only appears in the performance phase of Zimmerman's (2005) cycle, but also emerges before the performance phase whereby learners establish their controls. In the dissertation, I proposed an extension of Zimmerman's (2005) model, whereby the establishment of SRL control mechanisms is a phase prior to performance which involves the maintenance of controls (Figure 7). As an essential phase of SRL, the development of control establishment should be of pedagogical focus; moreover, in order to achieve higher-level operation of these controls within the population, I suggest considerations of building the development of these mechanisms into the curriculum.

Figure 7

A proposed extended model of Zimmerman's (2005) SRL cycle



A slight dissonance was found between the teachers' effort in incorporating digital VL and learners' preference. Several teachers listed digital approaches that enrich their VT practices, nevertheless, learners did not use technology in their VL to a great extent. Word-card

applications proved beneficial for logging the target items, but learners did not fully exploit the functions embedded into such tools (c.f. Pratiwi & Waluvo, 2023). Since research findings support the use of digital vocabulary learning and mobile-assisted language learning, more experimentation and discussions in the classroom would proximate the learners' preferred approaches and beneficial learning tools.

Among several implications regarding increasing self-efficacy, self-initiation and motivation, the results made it possible to draw up a profile of a learner conducting good SRVL activities. Such learner

- is motivated to conduct strategic SRVL,
- sets optimal goals in vocabulary acquisition,
- establishes control mechanisms to regulate commitment, emotions, metacognition, satiation, and the learning environment,
- initiates SRVL action,
- maintains motivation throughout the whole SRVL cycle,
- recognizes the importance of strategy use in SRVL,
- regulates strategies for vocabulary note-taking,
- applies SRVL strategies,
- maintains and develops SRVL strategy use through reflective practices drawn from previous SRVL cycles.

Furthermore, as emphasized in this study, self-regulatory learning processes are often initiated and developed through pedagogical means (Kormos & Csizér, 2014; Nagy & D. Molnár, 2017; Zimmerman, 2008). In this domain, successful educational practices can establish SRL behavior (Lewis & Vialleton, 2011), and impact learning outcomes (Tseng et al., 2006). Developing learners' SRVL mechanisms includes

- enhancing autonomy as a learner by facilitating independent learning and the use of strategies,
- establishing self-regulated learning behavior by discussions of control mechanisms and providing opportunities for building strategies,
- strengthening cooperative autonomy, as well as social self-regulation through collaborative tasks and projects,
- increasing pedagogical feedback about self-regulatory learning processes,
- facilitating learners' reflective practices whereby evaluation of completed SRVL cycles advances further conducts,

- teachers' professional development in SRVL-facilitative activities, in order to increase their motivation and self-efficacy, in conjunction with applicable means of differentiation that takes the personal factor of SRL into consideration.

6 Conclusion

In conclusion, the present study shed light on SRVL processes in the context of Hungarian secondary-school EFL learning and instruction. The mixed methods design uncovered learners' SRVL practices and their underlying factors, with useful information of connections and causal relationships between the facet of the mechanisms, as well as ways and reasons that determine the examined processes. Furthermore, the research involved inquiries among educators in the research context, providing meaningful insight into the pedagogical aspects of SRVL development. With the help of the collected data, I was able to formulate a model of SRVL processes (Figure 5), as well as a profile of an ideal SRVL-competent learner, and made suggestions for instructional means to enhance and facilitate these learning processes in classroom practices. While the research applied smaller samples than adequate for the generalization of my findings, I believe that my interpretations contribute to the better understanding of the research focus, and provide bases for further scrutiny. I suggest, for instance, examination of the problem area on larger samples, intervention studies experimenting with the workability of SRVL development within classroom practices, and further qualitative inquiries into pedagogical solutions, taking into consideration learners' individual differences, special needs, and positive learning outcomes.

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Appendices

Appendix A

The final scales with their labels used in this dissertation, the number of statements, and sample items in Study 1A

1. Motivated learning behavior – motivation (4 items). For example: *It is important for me to learn the meaning of new words emerging in my class learning material.*

2. Perceived self-efficacy – self-efficacy (4 items). *I am certain I can learn the pronunciation of new words emerging in my class learning material.*

3. Self-initiation – self-initiation (4 items). *I learn the words that I find important for myself.*

4. Beliefs about the importance of VL – importance belief (6 items). *I feel that for good English knowledge I need to know a lot of words.*

5. Beliefs about language learning aptitude – aptitude belief (5 items). *I think learning unknown words is an innate attribute.*

6. Belief about vocabulary learning methods – methods belief (6 items). *I believe that learning new words is easiest through using them in sentences.*

7. Metacognitive control – metacognitive control (4 items). *I have methods for maintaining my concentration during learning new vocabulary.*

8. Emotion control – emotion control (4 items). *If I get frustrated during vocabulary learning, I handle it right away.*

9. Satiation control – satiation control (4 items). *I am sure I can overcome boredom that emerges during vocabulary learning.*

10. Environment control – environment control (4 items). *If my environment suddenly becomes inappropriate for effectively learning new words, I try to solve the problem.*

11. Ability to select the appropriate task – task appropriateness (4 items). *I can select the appropriate method for my outside-class vocabulary learning.*

12. Note-taking strategies – note-taking (10 items). *I note down new words in my vocabulary notebook with their English definitions.*

13. Vocabulary-learning strategies – VL strategies (14 items). *I learn new words by writing English sentences with them.*

Appendix B

The final scales with their labels used in this dissertation, the number of statements, and sample items in Study 1B

1. Motivated learning behavior – motivation (4 items). For example: *It is important for me to learn the meaning of new words emerging in my class learning material.*

2. Perceived self-efficacy – self-efficacy (4 items). *I am certain I can learn the pronunciation of new words emerging in my class learning material.*

3. Self-initiation – self-initiation (4 items). *I learn the words that I find important for myself.*

4. Beliefs about the importance of VL – importance belief (6 items). *I feel that for good English knowledge I need to know a lot of words.*

5. Beliefs about language learning aptitude – aptitude belief (5 items). *I think learning unknown words is an innate attribute.*

6. Beliefs about vocabulary learning methods – methods belief (6 items). *I believe that learning new words is easiest through using them in sentences.*

10. Environment control – environment control (4 items). *If my environment suddenly becomes inappropriate for effectively learning new words, I try to solve the problem.*

7. Metacognitive control – metacognitive control (4 items). *I have methods for maintaining my concentration during learning new vocabulary.*

8. Emotion control – emotion control (4 items). *If I get frustrated during vocabulary learning, I handle it right away.*

9. Satiation control – satiation control (4 items). *I am sure I can overcome boredom that emerges during vocabulary learning.*

11. Commitment control – commitment control (4 items). *When I learn new words, I continue until I reach my set goals.*

12. Ability to select the appropriate task – task appropriateness (4 items). *I can select the appropriate method for my outside-class vocabulary learning.*

13. Note-taking strategies – note-taking (10 items). *I note down new words in my vocabulary notebook with their English definitions.*

14. Vocabulary-learning strategies – VL strategies (14 items). *I learn new words by writing English sentences with them.*

15. Change in the importance of SRVL after the emergency remote teaching – importance change in ERT (4 items). *Since I had to learn alone at home, I have seen how important it is to use good vocabulary-learning techniques.*

16. Accessibility and availability of vocabulary-learning digital tools as a result of the emergency remote teaching – accessibility/availability after ERT (4 items). *Since the implementation of online learning, I have found more smartphone applications that assist vocabulary learning.*

17. Change in motivation to conduct SRVL after the emergency remote teaching – motivation change in ERT (4 items). *Since we had online English lessons, I would like to use more diverse vocabulary learning methods.*

18. Perceived pedagogical development of SRVL after the emergency remote teaching – perceived development after ERT (4 items). *Since we were compelled to learn at home, my teacher has shown vocabulary-learning smartphone applications.*

19. Change in SRVL practices due to the emergency remote teaching experiences – SRVL change after ERT (4 items). *For me, online learning resulted in having effective vocabulary-learning methods.*

Appendix C

The Final Scales with Their Labels Used in this Dissertation, the Number of Statements, and Sample Items in Study 2

1. Cognitive attitudes about SRVL development and its opportunities – cognitive attitudes (4 items). For example: *In my English teaching practices, I have opportunities to introduce vocabulary learning strategies applicable outside classroom settings.*
2. Teachers' self-efficacy in SRVL development – self-efficacy (5 items). For example: *In my English teaching, I am able to develop my students' outside-class vocabulary learning strategies.*
3. Use of SRVL-developing techniques – SRVL development (4 items). For example: *In my English lessons, I show vocabulary learning strategies that my students can use outside class as well.*
4. Developing learners' vocabulary note-taking strategies – note-taking development (5 items). For example: *In my teaching, I regularly show vocabulary note-taking strategies to my students.*
5. Monitoring learners' note-taking strategies – note-taking monitoring (4 items). For example: *From time to time, I somehow check how my students note down the new words.*
6. Asking students' feedback on their use of self-regulated vocabulary learning strategies – SRVL monitoring (4 items). For example: *During teaching, I regularly ask my students' feedback on their outside-class vocabulary learning.*
7. Teachers' motivation towards developing SRVL – motivation (5 items). For example: *It is important for me to contribute to my learners' success in outside-class vocabulary learning.*
8. Delineation of the importance of vocabulary learning – importance delineation (4 items). For example: *With vocabulary-learning tasks, I emphasize the importance of useful vocabulary learning strategies outside class as well.*
9. Changes in teachers' SRVL-developmental motivation due to their ERT experience – motivation change (4 items). For example: *My experiences of distant learning have inspired me to show more vocabulary-learning methods that they can use by themselves.*
10. Changes in SRVL development due to ERT experience – SRVL development change (4 items). For example: *Since my students were compelled to learn at home, I teach them more vocabulary-learning techniques applicable for learning by themselves.*

Appendix D

The main themes with their descriptions in the learners' interview study (Study 3)

Theme (Total: 10)	Description
perceived EFL learning process	perceived successes and difficulties in general EFL learning
VL motivation	learner motivation in VL as per Dörnyei's (2014) L2 motivational system
perceptions about vocabulary	perceived vocabulary knowledge and VL importance
classroom VL experiences	perceptions, frequency, approaches, and facilitation of classroom VL
SRVL vocabulary origin	origin of encountered target vocabulary in classroom and SRVL processes
SRVL	SRVL frequency, strategy use, and recall approaches
note-taking strategies	note-taking tools, strategies, and pedagogical facilitation
control mechanisms	environment, emotion, metacognitive, commitment, and satiation control (Tseng et al, 2006)
digital SRVL	tools and perceptions of digital SRVL
dictionary	dictionary use in SRVL

Appendix E

The main themes with their descriptions in the learners' interview study (Study 4)

Theme (Total: 8)	Description
VL beliefs	beliefs about VL, VL motivation, and VL practice
VT beliefs	beliefs about vocabulary input, VT approaches, learners' efforts, and digital VT
VT practices	frequency of VT, vocabulary input, practice, output, assessment, digital VT practices and differentiation in the EFL classroom
VNTS beliefs	beliefs about VNTS skills and effort
VNTS development	monitoring and developing VNTS in the EFL classroom
SRVL beliefs	beliefs about the importance, support, feasibility, strategies, and development of SRVL
SRVL development	monitoring and developing SRVL, and observations about its workability
ERT	experiences and perceived impacts of ERT