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AUTHOR
AUTOR PRÁCE

Tobias Schneebaum

SUPERVISOR
VEDOUCÍ PRÁCE

Mgr. Petra Langerová

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Student: Tobias Schneebaum

ID: 240294

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doc. PhDr. Milena Krhutová, Ph.D.
předseda oborové rady

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Abstract

This bachelor's thesis explores the concept of self-directed learning and its crucial components. The initial chapters start with a few historical milestones and then discuss significant theories that shaped the concept of self-learning. Afterwards, the importance of self-evaluation for skill development is explained, followed by the great influence that teachers have on self-education, with a focus on a theoretical model of SSDL. Motivation, a key element for effective learning, is described with an emphasis on self-determination theory, distinguishing between theories' two types of motivation, leading to the final subchapter that focuses on different factors that influence motivation. The aspects examined in this thesis might broaden awareness of this important concept and the significance of its widespread application.

Keywords

Self-directed learning, self-learning, autonomy, self-evaluation, teacher's influence, motivation, intrinsic motivation, extrinsic motivation

Abstrakt

Tato bakalářská práce se zabývá konceptem sebeřízeného učení a jeho klíčovými složkami. Úvodní kapitoly začínají krátkými historickými milníky a poté se věnují významným teoriím, které utvářely koncept sebeřízeného učení. Poté je vysvětlen význam sebeevaluace pro rozvoj dovedností, následovaný velkým vlivem, který mají učitelé na sebevzdělávání, se zaměřením na teoretický model SSDL. Motivace, jakožto klíčový prvek, je popsána s důrazem na „self-determination theory“, přičemž teorie rozlišuje dva typy motivace, což vede k závěrečné podkapitole, která se zaměřuje na různé faktory ovlivňující motivaci. Aspekty zkoumané v této práci by mohly rozšířit povědomí o tomto důležitém konceptu a významu jeho širokého uplatnění.

Klíčová slova

Sebeřízené učení, sebevzdělávání, autonomie, sebeevaluace, vliv učitele, motivace, intrinsická (vnitřní) motivace, extrinsická (vnější) motivace

Rozšířený abstrakt

Tato bakalářská práce se zabývá problematikou sebeřízeného učení, které je velkou součástí osobního i profesního rozvoje. Zkoumá také důležité aspekty, které se týkají jeho docílení. Jelikož i samotné učení je v dnešní době často opomíjeno, může být tento koncept pro některé méně známý. Přínos práce tedy může spočívat také v rozšíření společenského povědomí o sebeřízeném učení. Zabývá se však i složkami, které mohou být nápomocné pro vzdělávání a sloužit k lepšímu pochopení motivace, jakožto klíčového aspektu učení.

Sebevzdělávání je proces, při kterém jedinec sám řídí, kdy a co se bude učit. Tento přístup dovoluje jednotlivcům plánovat učení, jak uznají za vhodné, a mohou tak rozšiřovat svoje schopnosti v daném oboru. Mezi hlavní faktory ovlivňující tento proces patří motivace, schopnost sebehodnocení a zpětná vazba od učitele, bez které je velice těžké dosáhnout kvalitního sebehodnocení. Motivace pomáhá jedinci začít s učením a překonávat postupné překážky, přičemž kvalitní sebehodnocení může poukázat na silné či slabé stránky dané osoby, podle nichž může následně upravit svůj studijní plán.

Cílem teoretické části této bakalářské práce je obecné popsání konceptu sebevzdělávání, jeho možné teorie a složky, které jsou klíčové pro jeho fungování. Mezi ně patří sebehodnocení, role učitele při sebeřízeném učení a motivace, která je rozdělena na více typů. Existuje mnoho studií na toto téma, ale málokteré shrnují tuto problematiku. Cílem praktické části bylo zjistit, do jaké míry jsou studenti seznámeni s konceptem sebevzdělávání, zda ho praktikují, a jaké výhody by jim mohlo přinést. Velké množství otázek se týká motivace, jelikož, jak již bylo zmíněno, se jedná o jeden z hlavních faktorů ovlivňující sebevzdělání.

V první podkapitole je stručně shrnuty hlavní historické milníky sebeřízeného vzdělávání, která začala již ve starověkém Řecku. Vzdělávání výrazně proměnil vynález knihtisku a naprosto revolučně využívání internetu, který zpřístupnil informace široké veřejnosti. Hlavní kapitola pojednává o různých teoriích sebevzdělávání, které jsou popsány v podkapitolách následujících po historii. Americký učitel Knowles definoval jednu z nejužší definicí sebeřízeného učení, čemuž se věnuje jedna podkapitola. Tvrdí, že sebeřízené učení je proces, při němž jedinec sám diagnostikuje své vzdělávací potřeby, stanovuje cíle a vybírá strategie k učení.

Druhá kapitola, která je postavena na základě Bandurovy sociálně kognitivní teorie, pojednává o důležitosti sebehodnocení. Podle Schunka se sebeevaluace dělí

na tři procesy, které jsou v této kapitole podrobněji popsány: sebezpozorování, sebehodnocení a pozorování vlastních reakcí (angl. self-reactions). Je zdůrazněno, že lepší sebehodnocení může motivovat k většímu úsilí a následovně k lepším výsledkům. Předpokládá se, že významnou roli v sebeevaluaci hraje sebeúčinnost (angl. self-efficacy) nebo také sebedůvěra ve vlastní schopnosti, což lze považovat za její definici. Za jeden z hlavních zdrojů sebeúčinnosti je považováno sebeovládání (angl. self-mastery). Toho lze dosáhnout tak, že si studenti rozdělí daný úkol na menší a jednodušěji zvladatelné části. Účelem je přesvědčit dané studenty, že dokážou dokončit jednotlivé úkoly. To je pak motivuje k pokračování a postupně mohou obtížnost úkolů zvyšovat.

Další kapitola představuje důležitost učitele v podpoře sebevzdělávání, jelikož může pomoci žákovi s lepšími studijními strategiemi. Někteří psychologové se domnívají, že by si žáci měli najít vlastní cestu k učení. Pro účely této práce byla však vybrána možnost, kdy učitel zasahuje do vzdělávání žáka. Jako podpora pro učitele je v nadcházející podkapitole popsán model, podle kterého se mohou učitelé orientovat. Je rozdělen na čtyři fáze, přičemž v poslední fázi se student stává „self-directed.“ Žák již nepotřebuje, aby ho učitel vedl a stanovoval mu cíle, jelikož je toho schopen sám, a učitel se stává pouze konzultantem. Je důležité zmínit, že sebeřízené učení neznamená učit se pouze sám, ale může zahrnovat i dohledávání informací s pomocí různých expertů na danou problematiku. Naopak v první fázi potřebují studenti pomoci se vším – jaké úkoly dělat, jak je provádět a v jakém pořadí. Důležitý je zde strukturovaný přístup s jasným cílem, přičemž student musí brát učitele jako experta a respektovat jeho roli v této fázi.

Poslední teoretická část se zabývá jedním z hlavních aspektů sebevzdělávání, kterým je motivace. Ta podněcuje jednotlivce k aktivní účasti ve studiu a k dosažení stanovených cílů. Bez motivace se studenti naučí daleko méně a s mnohem větší námahou. Teorie, která byla často uváděná v pracích souvisejících se sebeřízeným vzděláváním, se jmenuje „self-determination theory,“ a je důkladněji popsána ve stejnojmenné podkapitole. Součástí této teorie jsou dva typy motivací: vnitřní (angl. intrinsic) a vnější (angl. extrinsic). Vnitřní motivace funguje na základě zvědavosti a radosti z učení. Daný student chce poznávat nové věci, a to ho motivuje k tomu, aby se více učil. Toto je možné u dětí, které jsou zvědavé a hravé, již v raném věku. Studenti, kteří se chtějí dozvědět více a zlepšit své výsledky, mají z učení daleko větší radost než ti, kteří se pouze snaží vyhnout selhání. Naopak vnější motivace se soustředí na vnější

podněty ve formě odměn. Tato motivace může být velmi účinná při nezajímavých či náročných úkolech, kterým by se studenti jinak vyhýbali. Tento typ motivace může přejít ve vnitřní motivaci, přičemž žáci budou vykonávat dané úkoly, protože je baví. Faktory ovlivňující motivaci jsou popsány v další podkapitole, přičemž jedním z nejdůležitějších faktorů je zapojení rodičů do studií svých dětí. Rodiče totiž fungují jako první učitelé dětí, a pokud se účastní procesu studií svého dítěte, může to mít pozitivní vliv jejich vzdělání. Rodiče však mohou mít i negativní vliv na motivaci svého dítěte. Příliš vysoké nároky mohou vytvářet pocit, že daný jedinec musí být lepší než ostatní, aby potěšil své rodiče. Toto může být velice stresující, nejedná se tedy o vnitřní typ motivace, která může být prospěšnější jak pro budoucí studium, tak pro osobní rozvoj a sebevzdělávání.

Praktickou část tvoří analýza dotazníku, jenž je zaměřen na témata, která jsou popisována v jednotlivých kapitolách této práce. Analýza může sloužit jako zpětná vazba jak pro učitele, tak pro žáky, aby mohli případně pozměnit či upravit své studijní strategie. Tato část analyzuje jednotlivé odpovědi a ukazuje jejich možné výhody i nevýhody, které by se daly využít při aplikování sebeřízeného učení do každodenního života. Zde se také potvrdila důležitost a rozdíly mezi vnitřní a vnější motivací, které hrají klíčovou roli ve studiu i samostudiu.

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Author's Declaration

Author: *Tobias Schneebaum*

Author's ID: *240294*

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Brno, May 24, 2024

author's signature

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Author's signature

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INTRODUCTION

“Self-education is, I firmly believe, the only kind of education there is.”

Isaac Asimov

As languages become one of the essential elements of today’s rapidly evolving world, it is vital that self-directed learning should not be taken lightly. The knowledge of a second or third language has become much more common than it used to be, therefore, it is presumed that one is able to speak more than one language. It is now a necessity, rather than a privilege. Even though school provides students with extensive knowledge, it is merely the beginning of a never-ending process, that requires constant effort and endeavour.

It is important to address that in the English language, there are multiple terms used to describe self-education, which might have only a negligible different meaning. In order to maintain clarity and avoid possible confusion, only a selected few were used. One of the primary terms is “self-directed learning (SDL)” which is explained in the initial chapters and is used for the purposes of this thesis. This choice is made due to the extensive literature and established frameworks surrounding SDL, making it a comprehensive and widely recognized concept in this field of education.

As a starting point, it is crucial to acknowledge that self-directed learning is not just a single concept, as there are many interpretations and theories. A few are presented at the beginning of this thesis to provide a broader overview of the topic and chronologically sorted milestones are introduced to provide a better understanding of how far into the past this concept reaches.

The upcoming chapter describes the importance of self-evaluation, as it is a vital part of the process of self-learning, including its important processes and subsequently focusing on self-efficacy and ways of enhancing it.

After that, the significance of the role of the teacher will be introduced. When it comes to preparing students to be able to effectively self-educate, tutors might play a major role in influencing the transition to self-learning while inspiring students to self-manage their educational path. A significant model of teaching students self-evaluation is explored, offering strategies that teachers can apply.

As this topic is multidisciplinary, one of the key aspects of successful self-learning

is motivation, which cannot be omitted. Therefore, this chapter is devoted to understanding this concept, as the whole process of self-learning depends on it.

The practical part of this thesis presents data from a questionnaire, made specifically to correlate with the contents of this thesis. The main aim is to find out how familiar are the students with the concept of self-learning and how their educational lives are affected by various factors.

This bachelor thesis not only explores the self-learning phenomenon but also focuses on the important and inseparable aspects that greatly influence the idea. It may be used as an anchor for a comprehensive understanding of what self-education is about, as many researchers tend to focus solely on the definition of self-learning. Furthermore, the practical part might serve as feedback for students, as well as for teachers, so they might be able to improve in various parts of their academic lives. It also underlines the most important aspects and setbacks of their learning processes, while offering possible solutions to such problems.

1. THEORIES OF SELF-LEARNING

“All men by nature desire to know.”

Aristotle

In this chapter, some of the major milestones of self-learning are explored chronologically, beginning in ancient Greece, and subsequently, some of the most important self-learning theories are described.

1.1 Historical Milestones

Not many people realise that self-education has played an important role for centuries, as self-learning was a significant aspect even in the times of Greek philosophers, such as Socrates, Aristotle, and Plato. That is because it was often the only way that many people would learn, through self-education (Hiemstra 2). As an example, the Socratic method is considered to be valuable, as it promotes self-directed learning, as well as critical thinking. It works on the principle of cooperative dialogue, where teachers ask focused, open-ended questions, to encourage students to work their way to the correct answer. These dialogues motivate the student to be active rather than passively staying silent and not only receiving the correct answer immediately from the teacher (Sutton).

Gutenberg’s invention of the printing press in 1440 had a profound impact on self-directed learning and education itself. Knowledge of all kinds became widespread to many people and when a person achieved a basic level of literacy, they did not require a master to guide them (Collier 35, 36).

The idea of individualism and self-education was promoted by Jean-Jacques Rousseau in his book “*Emile*,” published in 1762. As a well-known philosopher, he believed and emphasised that people should interact with the natural world.; to test their hypotheses there and enhance their physical and mental well-being simultaneously. His perspective on self-learning was based on discoveries encountered throughout the outdoor exploration, as previously mentioned (Collier 38, 39).

The Chautauqua Movement impacted the concept of SDL throughout the 20th century, as it laid its foundational principles. As the first national adult education movement, it started as a summer camp in 1874, eventually becoming Chautauqua

University, and provided a variety of courses. The aim of the founders was for knowledge to be accessible to all (Collier 55-57).

The internet revolutionized how individuals access knowledge, as it became a tool that empowered learners to expand their knowledge and acquire new skills rapidly and much more easily, without the need for travelling to academic centres (Gil 396). It also provided individuals with increased control over their learning time, as they have immediate access to extensive information, and therefore, the flexibility to schedule their learning (Hiemstra 46).

1.2 Knowles' Theory of Self-Directed Learning

According to Knowles, learning itself is supposed to be perceived the same way as living. Consequently, he suggests extracting lessons from every action undertaken and treating every experience as a learning opportunity, suggesting that learning should be understood as a lifelong process (Collier 98).

Knowles is the author of one of the most widely acknowledged definitions of self-directed learning, who defines it as follows: “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes,” (18). He emphasized that one should be responsible for their own learning process and stated that most people only know how to be taught, but they still do not know how to learn.

However, Knowles does not refer to self-directed learning solely as an isolated issue but implies that it is usual for some helper (teacher, mentor) to be part of it (18). As one of the reasons why people should educate themselves, he argued that individuals who know how to learn properly will enjoy learning more, as they have a different mindset and view learning more purposefully. This motivates them to learn for longer periods of time and see new obstacles more as challenges (Collier 96). Knowles' concept also proposed that people are highly motivated when the learning content has practical applications (Manning 105).

1.3 Brookfield's View on SDL

Brookfield's perspective on self-directed learning has a fundamental problem with the definition of the verb "learning" compared to the term "education," as he argues that these two terms have different meanings. With Little, they argue that "learning" should be used as a noun, referring to an internal mental change in consciousness. "Education," on the other hand, should be specifically used to describe the process of overseeing external conditions that help the internal change. According to this definition, an educator is someone intentionally managing external conditions to bring out the desired internal mental shifts (cited in Brookfield 21)

Brookfield believes that learners are supposed to feel control over the content and know the purpose of what they are trying to learn while being able to look for alternatives in order to gain comprehensive knowledge. Learners should also be able to make their own judgements about the significance of the topic they want to learn something about (Brookfield). Even though the main focus is on the student, teachers still play a significant role in creating a suitable and supportive environment, where students can improve. (Klenowski 146). He emphasizes the significance of becoming aware of the process of SDL, especially focusing on internal changes of consciousness. That means, becoming aware of a shift in mindset and becoming conscious of how ideas and actions are influenced by their surroundings (Brookfield).

1.4 Autonomous Learning

"The only man who is educated is the man who has learned how to learn."

Carl Rogers

As many definitions indicate, autonomous learning was taken from "self-directed learning" approximately in the 1970s and to this day it does not have one unique definition. It is often considered as one of the theories for SDL, sometimes used interchangeably, as the concept emerged from the broader idea of SDL. One of the ideas is that autonomous learning is a learner's ability to effectively decide where, when and how they learn, as well as being able to successfully self-evaluate (Janíková). According to Dickinson, autonomous learning can be regarded as the willingness of a person to accept responsibility for his own learning, which is also connected to one's decision-

making. This autonomy should remain the same in or outside of school, where it is directed by a teacher (167). According to research conducted by Wang and Peverly, individuals that display autonomy in their learning are capable of engaging more actively in the learning process; they can adapt to objectives they have set and adjust them to the specific learning techniques that they are familiar with (cited in Dickinson 167).

“The ability to make your own decisions about what to do rather than being influenced by someone else or told what to do,” (Benson and Voller 4) As this citation implies, autonomy is connected to independence, which is regarded as something one is supposed to achieve during education. The concept of independence can be understood ambiguously, as both not being reliant on others and having responsibility are expected (4). Benson also claims that autonomy consists of what is believed to be able to manage your own learning, such as attitude and a person’s ability to learn by himself (1).

1.5 Experiential Learning Theory (ELT)

„Tell me and I forget. Teach me and I may remember. Involve me and I learn. “

Xun Kuang

Kolb is the author of one of the most influential theoretical models, that being the ELT. First published in 1984, this theory is based on the principle that learners acquire knowledge through active engagement or direct experience. Experiential learning highlights the learners’ personal development and places the responsibility on individuals to direct their own learning process. This promotes active involvement, critical thinking, creativity and problem-solving; it is also frequently referred to as “learning by doing” (Main).

ELT is represented by a four-stage learning cycle, where in order for learning to be successful, the learner needs to complete the entire learning cycle. However, the individual may enter the cycle at any step but has to follow through the phases gradually (Sharlanova 37).

1. **Concrete Experience** – The desired task is done. In specific situations, individuals often rely on emotions, flexibility, and adaptivity to change, rather than sticking to systematic approaches when dealing with different problems (Main).

2. **Reflective Observation** – In this stage, individuals go back to the initial point of the task and review what has been accomplished and attempted. They rely on objectivity, their own judgement without necessarily initiating action and form their opinion based on what they think and feel (Main; Sharlanova 37)
3. **Abstract Conceptualization** – Here, individuals have to understand the connections between their previously noted results. They focus more on logical approaches rather than their feeling, to comprehend the problem. It is common to employ systematic planning and come up with ideas and theories when addressing and solving problems (Sharlanova 38).
4. **Active Experimentation** – In this stage, learning has an active form - planning (experimenting). During planning, individuals might uncover new insights to enhance the approach to the task, identifying specific actions that must be performed in order to do so (Sharlanova 38).

To conclude, the goal of the cycle is to make little improvements, so they could accumulate into significant improvements later. The key is to identify these small, manageable changes that may contribute to overall improvement (38, 39).

2. SELF-EVALUATION

“Knowing yourself is the beginning of all wisdom.”

Aristotle

Self-evaluation plays a major part in the process of SDL and helps to establish an effective working environment for the person, as individuals would not be able to engage in self-learning without this process (Schunk 3). Research provides evidence for the hypothesis that successful SDL relies on positive self-assessments of one’s learning progress and that contributes to maintaining motivation for learning (4). To avoid confusion, self-assessment is used synonymously with self-evaluation.

According to Schunk, who employed Bandura’s social cognitive theory, self-evaluation may consist of three processes: **self-observation, self-judgment, and self-reactions** (4).

Self-observation is paying attention to one’s thinking process, as well as one’s behaviour. While crucial, this aspect alone is not adequate for sustaining effective self-regulation (Schunk 4; Zhang and Nguyen 62).

Self-judgement is a process where students examine if their progress is relevant and good enough for achieving their desired goals based on certain criteria. Thanks to that, they may figure out what they have already mastered or on the contrary, what is still needed to improve (Zhang and Nguyen 62).

Schunk categorised **self-reactions** into **evaluative** and **tangible**. That is because people react differently to their progress when trying to achieve a goal. When talking about **evaluative** reactions, people are aware of the progress they have made so far, and that becomes the primary motivator in achieving the goal; it is the belief of making progress with satisfaction after attaining it. On the other hand, people with **tangible** reactions reward themselves with things such as buying new clothes or going for a drink with their friends (5).

As shown in Fig. 1, three processes that were just mentioned are embedded in the theoretical model for self-evaluation (Ross 6). Studies suggest that self-evaluation greatly contributes to the cycle of learning. Positive self-evaluation motivates students to set higher goals and put more effort into attaining them. Therefore, with the former and latter combined, achievement is obtained. After accomplishment, there must be self-assessment

once again, with the three processes stated previously. All steps of the model combined contribute to self-efficacy (Rolheiser and Ross 5; Ross 6).

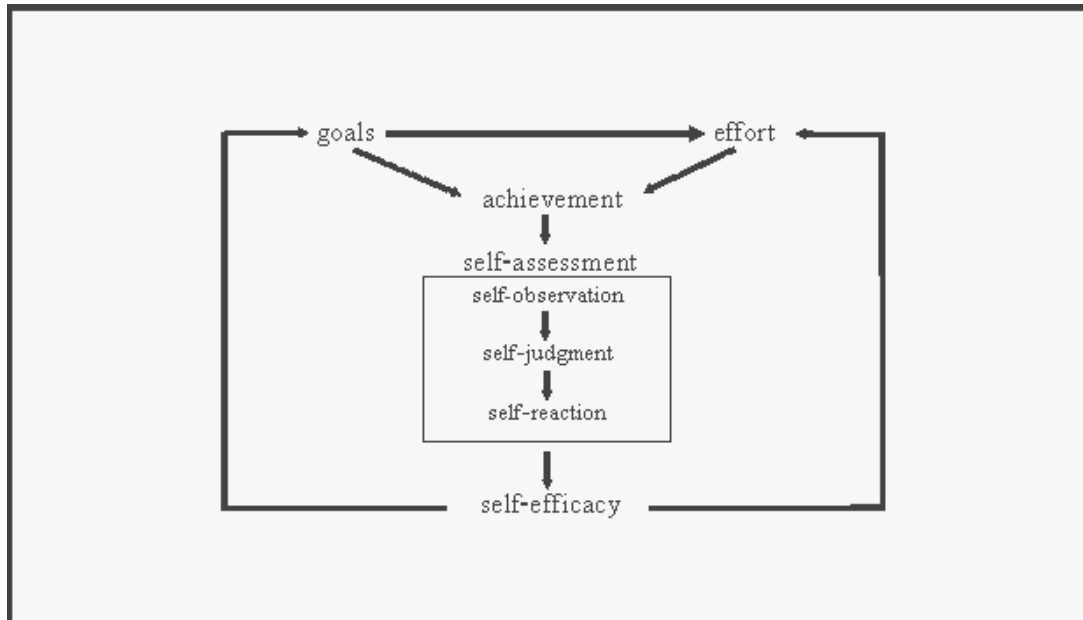


Fig. 1 How Self-Evaluation Contributes to Learning (Ross 6)

2.1 Self-efficacy

Self-efficacy is believed to play a major role in determining one's ability to perform a particular task. It is considered more narrowly defined and focused compared to self-esteem or self-confidence; it is also more easily developed. Bandura defined it as an individual's confidence in their ability to effectively perform a specific task. He also argued that self-efficacy stands out as a prime predictor of motivation, wielding considerable influence over an individual's performance in almost any effort (cited in Heslin 705). That is related to sustaining the effort in learning or mastering new skills, as people enthusiastically look for ways to improve their strategies and not focus on finding excuses not to do a certain task. Furthermore, individuals with high self-efficacy tend to be better at receiving negative feedback, as they try to learn from such critiques. Nevertheless, people with low self-efficacy frequently associate a negative outcome with affirming their perceived incompetence. In order to avoid such feelings, individuals tend to blame others or the situation for their inconvenience. This could lead to more

significant issues, such as the inability to acquire the skills necessary to perform more effectively in subsequent attempts (Heslin 705).

One of the key sources of self-efficacy is enactive **self-mastery**, which is the most influential, subsequently followed by **role-modelling**, and lastly **verbal persuasion** (706).

According to Heslin, in order to accomplish enactive **self-mastery**, individuals do not have to achieve the whole task at once but rather divide it into smaller and more achievable tasks. It is the feeling of success even while doing a rather smaller portion of the given task that is motivational. The aim is to persuade individuals that they are capable of successfully completing tasks of a similar kind, even with increasing difficulty. To achieve this, it is best to break down difficult tasks into smaller steps, so they would be easy enough for one to complete; the emphasis is on the initial success. Nevertheless, it is vital that the difficulty of smaller tasks gradually increases, as there would be no progress whatsoever if done otherwise (706).

Role-modelling is observing other people perform certain tasks that they are trying to achieve themselves. By visualizing themselves executing the task successfully, they can come up with various ways to do the particular task and gain confidence that they will be able to do it similarly (706). When choosing role models, it is important to keep in mind that the chosen ones should see challenges as opportunities to learn something new or acquire new skills; it is not for them to see how talented they are. In order for role-modelling to be most effective, it is advised to choose someone that the individual personally likes and that is overall similar to the observing person (e.g., gender and age). In addition to that, it is recommended to observe not only the success of others but also the failures, assuming that the person is confident enough, that he will not make the same mistakes (706).

Verbal persuasion is based on the praise of one's capacity to enhance effectiveness and competence by respected individuals. No matter the source, in order to increase self-efficacy, it is crucial for the persuasion to be credible and focus on the work and effort invested in mastering the desired skill.

3. TEACHER'S ROLE IN PROMOTING SELF-LEARNING

„Education is the kindling of a flame, not the filling of a vessel.“

Socrates (Sweeney)

The introductory quote points to Socrates' perspective on the approach to education, as it should be about curiosity and understanding rather than memorization of facts. The metaphor “kindling of a flame” symbolizes the ignition of curiosity and critical thinking, as the flame refers to the burning enthusiasm for knowledge. The expression “not the filling of a vessel” conveys the idea that the information is “poured into” a learner, who represents an empty vessel, suggesting that education goes far beyond the passive absorption of facts. Instead, it should be accompanied by genuine curiosity and a passion for learning.

It is impossible for a teacher to have a perfect education strategy that would fit every learner, as every individual learns in a different way. The approach must be consistently altered, in order to be efficient (Tholin 1). There was also a question if the students' learning should be intervened whatsoever. A few psychologists argue that learners should be left alone with their own strategies, both advantageous and disadvantageous. Students should supposedly learn how to cope with them, and parents or teachers should not step in. However, in this thesis, it is necessary to pick the strategy where teachers do intervene (Mareš 370).

According to Mareš, the school's main aim should be not only to teach pupils the curriculum but, above all, to teach them how to learn and how to manage their learning. Nevertheless, this approach is not as straightforward as it may initially appear, as it remains an uncharted territory for the majority of teachers. Consequently, further support in the form of a theoretical model, which is explored in the upcoming chapter, might be required (373).

3.1 SSDL Model

The Staged Self-Directed Learning Model (SSDL) argues that students can enhance their self-learning abilities through four stages with the cooperation of a teacher who may either help or, on the contrary, worsen that development. The latter might happen when a teacher uses a style that is unsuitable for the stage that the learner is currently on (Grow 125).

Stage	Student	Teacher	Examples
Stage 1	Dependent	Authority Coach	Coaching with immediate feedback. Drill. Informational lecture. Overcoming deficiencies and resistance.
Stage 2	Interested	Motivator, guide	Inspiring lecture plus guided discussion. Goal-setting and learning strategies.
Stage 3	Involved	Facilitator	Discussion facilitated by teacher who participates as equal. Seminar. Group projects.
Stage 4	Self-directed	Consultant, delegator	Internship, dissertation, individual work or self-directed study-group.

Fig.2. The Staged Self-Directed Learning Model (Grow 129)

3.1.1 Stage 1

The first stage is very teacher-centred. Students, referred to as “**dependent**” in this phase, need help in every way, such as what tasks to perform, how to execute them, and when. They currently perceive teachers either as experts who know what is required, or their engagement is often passive, as they engage with teachers who “make” them learn (Grow 129).

In this stage, it is necessary to have a well-structured, strict approach to the subject, as well as set clear goals and straightforward techniques for attaining them. It needs to be ensured that students are actively engaged in attaining particular and identifiable skills. The criteria must exceed what students would set for themselves, and the acknowledgement of success should not be overlooked (130).

As the student is not yet familiar with the concept of self-learning entirely, teachers should avoid providing alternatives to learners and should ensure that the communication is clear and comprehensive, primarily one-way. The emphasis should be mainly on the subject rather than the learner, and grading should be objective and directly tied to specific tasks (130).

Overall, teaching dependent learners involves emphasising teacher authority, utilising a structured approach with clear objectives, and recognizing the crucial role of teacher expertise in guiding their development (130).

3.1.2 Stage 2

In the second stage, learners move to a different category referred to as “**interested,**” and for many schools and teachers, they are called “good students.” At this point, they start understanding the reasons behind assignments rather than just following instructions blindly. At this stage, the teacher motivates the class and tries to bring excitement from learning. It is important to take a highly supportive approach while trying to convince, explain, and engage students in order to strengthen their eagerness and enthusiasm. It is argued that learners follow along if they understand the purpose and receive guidance. It is also possible if they have a favourable connection with the teacher, which is in contrast to Stage 1 learners, who may not respond positively to personal interaction with their teachers (Grow 131).

It is necessary to explain the importance of skills and how important the assignments are to achieving such abilities (131). In this stage, it is advised to initiate the training of fundamental skills, such as goal setting. It is also important to assist students in gaining awareness of their preferred learning methods, life goals, and personality traits. Compared to Stage 1, communication is two-way, as teachers convince students of the significance of each task and learners respond to that with their interests. Stage 2 mirrors Fox’s “shaper,” which is a teacher who “views students, or at least student brains, as raw material (metal, wood or clay) to be shaped, or moulded, or turned to a predetermined and often detailed specification,” (cited in Grow 153).

3.1.3 Stage 3

In the third stage, students are known as “**involved,**” as they see themselves actively involved in their education. They might explore certain subjects on their own but are

ready to do so with a good guide. At this point, it is most beneficial for students to learn about how they learn, including the application of effective learning strategies. They introspectively explore themselves as they try to distinguish their genuine feelings, values, and desires from external expectations (Grow 133).

In this stage, students start to believe that they might become equal to the teacher in the future. They want to be treated respectfully for who they are and what they can achieve but they may not possess the necessary experience or motivation to continue independently. The teacher acts like a guide, offering methods and techniques and leading students through the process of learning and achieving desired goals. As students become more competent, they can collaborate far more effectively than in previous stages, and Stage 3 becomes a place that they do not want to leave, as they still have the support of a friendly group (133).

3.1.4 Stage 4

In the final, fourth stage, students labelled as “**self-directed**” do not need help from experts in setting their goals as they are capable of doing so individually. They do; however, use certain institutions, experts, and additional resources to work towards defined goals. Therefore, the ability to be an independent learner does not mean that the individual must study alone.

The teacher’s role is to be a consultant and remain in the role of an expert when discussing the problematic matter that the student finds along the way. It is about the enhancement of students’ learning capabilities and empowering learners on a personal level. However, in Stage 4, the learner might not require guidance at all. In this case, the teacher may present a challenge and let the student deal with the task almost by himself. The teacher would step in only when asked to do so and not directly help to solve the problem, but rather empower the learner to handle the task independently.

4. MOTIVATION

“The only way to do great work is to love what you do.”

Steve Jobs

The term “motivation” originates from the Latin verb “movere,” which translates to “to move,” as to what moves an individual to make specific decisions or perform certain tasks. However, these seemingly straightforward questions gave rise to many theories and research, leading to a variety of understandings of this concept, and still produced limited unambiguous responses. The goal of motivation theories is essentially to comprehensively explain why humans think and act as they do, and it is highly questionable whether a concept of such complexity can be adequately captured by a single theory (Dörnyei and Ushioda 3).

In effective learning, motivation plays a crucial factor, as it drives students to think, concentrate and actively engage. It encourages students towards achieving their goals faster and with greater effort than they would normally put in. Without being motivated, individuals learn far less and with greater difficulty, as they see no point in learning a certain subject (Borah 551).

In the upcoming chapter, a theory is explored, and its types are related to self-directed learning, as they were discussed and connected to SDL in other materials.

4.1 Self-Determination Theory (SDT)

According to Ryan, SDT is a comprehensive theory that addresses human motivation, as well as personality development, at a fundamental level (1). The theory suggests that people are primarily compelled by a desire for personal development and fulfilment (Cherry). It also deals with universal psychological needs, such as competence, relatedness, and autonomy, which are argued to be crucial for people to healthily function (Ryan). This concept of “basic psychological needs”, plays a vital role in comprehending both satisfactions and supports that are required for motivation that has high quality and autonomy.

- **Competence:** Individuals must acquire mastery of various tasks and acquire diverse skills. When they believe that they possess the necessary skills for success, they are more likely to take action to achieve goals (Cherry).

- **Relatedness:** People need to feel connected to each other and feel like they belong somewhere (Cherry).
- **Autonomy:** A person needs to feel in charge of their goals and behaviours and have a sense of making a real change, provided that one makes a direct effort to achieve that (Cherry).

According to self-determination theory, the support of individuals' needs for competence, relatedness, and autonomy might significantly influence motivation. Among the mentioned needs, actions such as maintaining positive connections, respecting choices, or providing tasks that match a person's abilities are involved. This concept is called "need support" and it is seen as one of the key factors in understanding the differences in motivation development throughout an individual's entire life (Teixeira et al.).

SDT differentiates between intrinsic and extrinsic forms of motivation that regulate one's behaviour; these are discussed in the upcoming chapters.

4.1.1 Intrinsic Motivation

This phenomenon is argued to possess one of the greatest positive potentials of human nature. It is the will to seek challenges, explore, and learn. It is often compared to young children, as they are active, playful, and curious (Ryan and Deci 70). Most importantly, the motivation to engage in an activity is driven by the inherent satisfaction it provides, rather than getting any external rewards or specific outcomes. People engage in certain activities because they seek pure enjoyment from them (Cherry). As Coon and Mitterer stated, "We simply enjoy an activity or see it as an opportunity to explore, learn, and actualise our potentials," (cited in Cherry). According to Ryan and Deci, intrinsic motivation reflects the inherent tendency toward spontaneous interest, mastery, and exploration. These elements are essential for social development as they are the source of joy across the lifespan (70).

Intrinsic motivation to learn is characterised by the enjoyment of learning, which is affected by various aspects, such as long-term achievement, or reduced anxiety during homework. Overall, students, who focus on and set learning goals, such as improving grades, enjoy learning more compared to those who are primarily concerned with avoiding failure, such as not failing the upcoming text. In other words, it is more

beneficial to focus on setting goals to improve performance, rather than focus on setting goals to avoid poor performance (Froiland and Worrell).

4.1.2 Extrinsic Motivation

Extrinsic motivation is a motivation that engages the individual to behave or perform certain actions in order to get certain external rewards. These rewards might be either in tangible forms, such as money, or intangible forms, such as recognition or praise. For example, students might put in a lot of hard work to prepare for a test, aiming to impress their parents with great results rather than solely aiming for a better education (Cherry). As opposed to intrinsic motivation, this type is argued to be one of the less autonomous ones, as it is externally regulated by others, in the form of rewards (Deci et al.).

Extrinsic motivation is not necessarily a negative factor, as it might be highly effective. It can serve as an efficient and valuable tool to keep individuals motivated and focused on their tasks. This may be essential if the task is challenging or uninteresting, such as a long homework assignment. In other cases, extrinsic motivation may play a crucial role in promoting positive behaviour. If applied carefully, extrinsic type of motivation has the potential to evolve into intrinsic motivation, as individuals begin to excel in certain tasks driven by personal enjoyment, or fulfilment (Cherry).

4.2 Factors Influencing Learner's Motivation

As there are many factors influencing motivation, this chapter mentions a few of them that play an important role in shaping the learning process.

One of the most significant aspects of student motivation is the **parent involvement**, as they serve as a child's initial educators before they go to school. By actively participating in a child's learning process, parents can set a great example, meaning that the child will have support both in school and also at home (Drew et al.). This involvement, such as assisting with homework, is argued to play a leading factor in a learner's academic success. However, parents may also negatively affect students' academic motivation. This occurs when dealing with the performance of the learner. As parents might establish higher expectations than suitable for the individual, they create a sense of obligation to outperform others, which can be highly stressful (Buoy 8).

The teacher's attitude and enthusiasm are proven to affect intrinsic motivation, as described in previous chapters. Changes in tone, gestures, and facial expressions are all aspects that might alter the individual motivation to listen to and learn the discussed topic. According to a study conducted by Patrick and others, those who listened to more dynamic and energetic presentation were more likely to show interest, whereas those who encountered less enthusiastic lecture struggled to maintain focus. Furthermore, it is argued that this motivation is mutual. The teacher's enthusiasm has the potential to lead to increased student motivation, while the energy of an inspired group of learners may inspire the teacher as well (Patrick et al. 226).

The interests and experiences of the individual are one of the vital aspects of motivation. The learners are significantly influenced by what engages them; the more the subject is interesting, the more motivated the individual will be to learn it. Experiences also greatly contribute to affecting one's motivation, as they enable the learner to see the personal meaning in education; it helps to recognize the practical relevance of what is learned. The connection between the educational content and real life makes the learning material more interesting and meaningful. This focus on personal connections and real-world applications is a great start in developing lifelong enthusiasm for learning in many areas (Beers 110).

5. PRACTICAL PART

As a practical part of this thesis, a survey was conducted which managed to obtain responses from 50 students. The research objective was to find out how familiar the students are with the concept of self-learning and how it affects their educational and everyday lives. In order to gain a better understanding of their prior comprehension of SDL, their motivation, and current educational strategies, questions regarding the personal life and behaviour of each student were asked. A few questions, as well as answers, were predesigned to correlate with the theoretical part of this thesis in order to see the outcomes that would arise from this specific group. Nevertheless, the entire structure of the questionnaire (see Appendix) was made to align with the overall outline of this work. It is also important to mention that this thesis discusses a very specific topic, which may not be so commonly known among the students. Therefore, the questionnaire contains questions that also focus on the learning itself, not only self-learning.

The targeted group consisted of students of any programme of the Faculty of Electrical Engineering and Communication at Brno University of Technology, to whom the questionnaire was distributed, and the students were selected randomly. The total number of respondents participating in this survey was 50: 42 males, 7 females, and 1 identifying as “other.” The average age was between 21 and 23 (28 respondents), followed by 13 respondents aged 18 and 20, and 9 respondents between the ages of 24 and 26.

The first part of the questionnaire consists of questions regarding studying in general as well as asking about one’s strategies and study plans. It also examines the sufficiency of the information students currently receive in school.

The second part focuses on how students perceive their learning abilities, how they evaluate themselves, what affects their evaluation, and the impact that teachers have had on their learning throughout their education.

The final questions delve into the motivational side of self-learning, exploring factors that motivate students as well as the factors that do the opposite.

5.1 Research Results

Table 1. How often do you study during the semester (doing homework does not count)?

Answer	Number	Percentage
Several times a week	28	56%
Just before the exams (in the examination period)	19	38%
Every day	3	6%

The data presented in Table 1 shows that a significant majority reported studying several times a week, suggesting that these students take an active approach to learning. It may also indicate that such students also enjoy the particular topic they are studying. On the other hand, 38% of total respondents chose the option that they primarily study just before the exams (during the examination period). This may reflect the reliance on the short-term memory of the students, as well as the lack of interest in the studied subjects. That might be less effective for long-term knowledge, and additionally, it can be suggested that students who chose the second answer, are not engaged in self-learning, as that would mean required them to study more frequently. Only 3 people out of 50 chose the “Every day” answer. These students might represent highly dedicated people who are particularly active in their learning process. Such students can be expected to have a higher intrinsic motivation, which, as described in Chapter 4.1.1, is a motivation that provides satisfaction from the learning itself. This data can help inform teachers on how students may study their materials and possibly alter the teaching strategies.

Table 2. Do you make a study plan?

Answer	Number	Percentage
No, not at all	19	38%
Yes, I try to plan at least the next day	15	30%
Only in the examination period	8	16%
Yes, I plan my whole week	6	12%
Other	2	4%

According to Table 2, most of the students tend not to create any study plan at all, which means that 38% of individuals possibly lack structure in their study strategy, thus potentially making them less efficient in their learning. It is argued that there is a link

between time management and inefficient studying, which is connected to procrastination, a major problem among today's students. Without a structured study plan, students may get into a difficult position, where they have more responsibilities than they can manage. That results in higher amounts of stress and poor performance in school (Manninen and Wadsö Lecaros 30). However, 30% of students selected the "Yes, I try to plan at least the next day" answer. This short-term planning might increase the efficiency of the person's study plan, as it may take them less time, and therefore, there would be more time for other necessities. Such planning might contain creating an outline for what to learn, setting specific goals, or scheduling the entire day. This approach can be beneficial for students who often feel overwhelmed with long-term planning and prefer more flexibility, so they can adjust their latest needs and priorities. According to Manninen and Wadsö Lecaros, this also relates to the stressful cycle that students put themselves through. It is because they do not give themselves enough time to finish a particular assignment or to finish studying for exams, and they consistently ignore their past experiences (31). Among the respondents, 16% stated that they only make study plans during the examination period. It can be assumed that these individuals expect to study large amounts of information in a very short period of time and, therefore, make a study plan. According to a study by Siagian, this practice is called cramming and there are a few reasons why students choose this approach. One of them is the fact that cramming for previous important exams worked, according to the students. However, whether the cramming really worked is determined by the knowledge retention time. In other words, if it lasts for a short while or extends over a longer period. Another reason is the dopamine rush (dopamine = pleasure and reward hormone) after successfully passing an exam and getting a good grade, which links cramming with positive feelings, and this increase in dopamine effectively erases any previous obstacles concerning studying for the exam. In addition to that, dopamine also reinforces this pattern so that the individual would take the same approach in upcoming exams. The last reason is, as mentioned previously, poor time management. Numerous activities and social events are available for the students, but they are also very time-consuming, which can lead to burnout, and in extreme cases, health issues. It is argued that intense cramming might be occasionally beneficial in order to pass challenging classes while also enhancing academic performance (54-55). The 12% of the respondents who plan their whole week

might represent a group of students who have good time management abilities, and this method helps them manage their time efficiently. This might also be beneficial for their long-term studying, as it promotes a more relaxed study environment and less last-minute pressure due to studying for an upcoming exam. Nevertheless, this approach has to be done carefully, as it requires a good understanding of one’s capabilities and, therefore, a good self-evaluation of their study skills. As opposed to short-term planning, it is not as flexible when unexpected academic or personal challenges arise. The last option was an open-ended question, chosen by two students, where one of the answers could not be considered relevant and the other was that the individual plans once a month. This approach might be focused on long-term tasks, which, however, could become challenging when dealing with daily or urgent problems. One possible enhancement could be a review in the middle of the month to ensure greater flexibility and possible adjustments to the plan.

Table 3. Are you interested in the topics of your current studies?

Answer	Number	Percentage
Rather yes	28	56%
Yes	13	26%
Rather no	9	18%
No	0	0%
Other	0	0%

In Table 3, the majority of respondents selected the “rather yes” answer. This response suggests that these students find most of their studies engaging, but also that they find a few subjects not so appealing. According to Schug, this might be because these students believe that such subjects lack relevance for their future careers. In this case, teachers might want to enhance their way of delivering the content or change the strategy for certain groups of students (classes). This may include focusing more on the relevance of the subject, for example, linking topics more closely to known and current events or presenting real-life applications (6). The second most frequently selected answer was “yes,” which may suggest that this group of students is highly motivated to study and potentially engage in self-learning as well. Intrinsic motivation should prevail over extrinsic motivation, making studying itself more enjoyable and possibly leading to

improvements in one’s learning strategies, in order to make studying more effective. The least chosen answer was “rather no.” This group of students does not enjoy their current studies, and consequently, it can be presumed that they do not engage in studying with much enthusiasm, and their academic performance is presumably low. For this reason, the possibility that these individuals are practising self-education is very low, at least regarding the topics of their current studies. With this approach, cramming, as introduced earlier, is expected, as is frequent procrastination. This links to extrinsic motivation, as these students are probably motivated mainly by the desire to pass their exams rather than to learn something new and broaden their knowledge.

Table 4. Do you study something extra apart from the necessary for your regular classes?

Answer	Number	Percentage
Yes, I like to learn something extra	18	36%
No, I am not that interested	15	30%
No, I do not have time for it	12	24%
Yes, it will help me in my future studies	5	10%

Table 4 presents data on how many students study something extra to their current regular classes. A total of 36% of respondents indicated that they study something extra because they presumably enjoy their studied topic and also like learning. This shows that these students may have high intrinsic motivation, as they want to learn something more. This approach might be very beneficial, as such students tend to engage more in the studied content, which leads to a better understanding of the topic. Most importantly, this group of students are engaged in self-education. Another 30% of the students reported that they were not interested in learning something additional. This may be caused by a lack of curiosity about certain topics, low satisfaction with the current studies, or students may feel overwhelmed by the existing responsibilities. 24% of people expressed that they do not have time to study something additional. This is most probably connected to poor time management, as students think that they do not have the time to study additional materials. As stated previously, better time management can enhance not only students’ academic performance but also decrease stress throughout their studies. Lastly,

10% of the students intend to use their self-learned knowledge in their future studies, which can motivate them to put high effort into their studies. Such students focus on the long-term benefits of studying more than required and are aware of the potential benefits it can bring. Overall, 28% of respondents selected the “no” answer and the other 72% chose the answer “yes.” Those who answered “no” probably think that their educational needs are sufficiently met by the curriculum, and they may focus more on other responsibilities. It is also possible that they solely lack the motivation to learn something more. On the other hand, those who answered “yes” want to expand their knowledge in the given field, whether it is for their future purposes or the enjoyment of studying itself, and that may help them not only in their professional lives but also in their personal development.

Table 5. Is the information acquired at school sufficient for your studies?

Answer	Number	Percentage
Rather yes, I only look up things I do not understand	34	68%
Not really, I often have to study unexplained material	9	18%
No	5	10%
Yes	2	4%

According to the data shown in Table 5, 68% of students think that most of the information acquired at school is sufficient, and they only need to look up things they do not understand. This approach could be viewed positively, as other students might not care enough to search for unexplained materials, and it might lead them towards possible self-learning. Moreover, it indicates that these students probably want to learn more, as they are not only passively absorbing information, regardless of whether they understand it or not. 18% of the students do not really think that the information provided in school is sufficient, and they often have to study things that were not explained properly or omitted altogether during the lectures. Students might find themselves in a position where they are forced to become substitute teachers and study on their own, which can be considered self-education, but it does not come from their own motivation to learn something extra but rather as a necessary step to keep up with their studies. Among the

respondents, 10% chose “no” as their answer. These students do not think they get a sufficient amount of information at school and must probably rely solely on external sources in order to understand the topic. Due to this, students may also have gaps in more comprehensive topics, as the explanation and connection between the topics are missing, because of the absence of the teacher. Only two people chose “yes” as their answer. This might be due to the answer itself, as it is rather straightforward, and it can be presumed that schools (teachers) are not able to always provide fully sufficient information, considering that everybody has different gaps in their knowledge.

Table 6. Can you estimate how much time do you need to learn something?

Answer	Number	Percentage
Rather yes, I usually manage to learn everything on time	28	56%
Rather no, I often feel that my knowledge is inadequate	10	20%
It surprises me that it is taking me longer than I expected	6	12%
I make a plan, but I often do not stick to it. Why? (answer in the following question)	3	6%
Yes, I know how much time I need to learn	3	6%
I do not plan, I hope that I will somehow learn it right before the exam (successfully or unsuccessfully?)	0	0%

According to Table 6, a majority of students chose the “Rather yes, I usually manage to learn everything on time” answer, suggesting that they have a rather good understanding of their learning skills, and they can sufficiently manage their time to study, which can be linked to good self-evaluation. This may also indicate that such students are more likely to experience less stress related to academic responsibilities and that they may have more efficient study habits than others. On the contrary, 20% of respondents frequently feel that they cannot learn all the desired things on time. This shows that these students may struggle with self-evaluation of their learning skills or possibly have poor time management. This may result in increased stress during their studies, as students

frequently discover that the time they spend studying is insufficient to fully understand the topic or to meet the standards required for the test or exam. Such individuals may benefit from changing their study strategies or asking for help from students who have more effective learning strategies. 12% of respondents are often surprised that their studying takes more time than they expected. Such students often encounter difficulties with estimating time for their studies, which could lead to higher stress due to time pressure, potentially lower quality of their assignments, or inadequate knowledge. That might be caused by the inability to focus for longer periods of time while studying, which may encourage some students to change the way they learn and adapt to new and more efficient ways of studying. 6% of students stated that they tend to make a study plan but then they often do not stick to it. This answer is elaborated in a subsequent paragraph, as students had to answer it in the next question. Three respondents stated that they are able to estimate how much time they need to learn something. These students are likely good at self-evaluating their study skills and managing their study time more effectively, which might be less stressful for them in the long term as they might not be time pressured by incoming deadlines or exams. Ideally, they could plan their academic responsibilities for both immediate and future needs. However, this is just an assumption, for this statement to be factually true, more research would be necessary. This skill set might serve as a good foundation to start self-learning if the individual is not already doing so.

Table 7. I make a plan, but I often do not stick to it. Why? (from question 6)

Answers

-
1. Reluctance to study, I prefer to do anything else that I enjoy more

 2. I get distracted by my surroundings

 3. Because I often postpone it till "tomorrow"

 4. I am a lazy person; I did not study much in high school, and I am not used to studying at home

 5. I do not like to spend too much time on one topic, I want to do other things. I also procrastinate

 6. Because I procrastinate

In Table 7, answers to an open-ended question from Table 6 are written. One of the answers had to be slightly rewritten, as it contained explicit words. Each answer was

assigned a number for better orientation in the table and in this commentary. The first response indicates a lack of motivation for studying, as the person does not enjoy their studies. If students do not enjoy their studies, they are more likely to procrastinate and turn to different activities that these individuals prefer. This particular person would probably benefit from finding ways to make learning more engaging, whether it is incorporating favoured activities into their study plan, or trying to find new learning methods that would make their studying more effective and less time-consuming. The second answer suggests that the student has many distractions in his study environment that could draw their attention away from work. This might be a major problem if the students are planning their studying sessions, as due to these distractions, they are probably unable to finish in the desired time, and every time they study, it takes them much more time than they anticipated. One of the things that might be changed to remove this problem is to dedicate a special place solely for studying, so that particular place is associated with only educational activities. The third answer is a very common sign of procrastination. This student acknowledges that they tend to delay their responsibilities. In order to change that, such students might try to set smaller tasks that are not so time-consuming, more achievable to them, and do not seem so hard to finish. This might motivate them, as they would finish these tasks more frequently, developing better strategies for studying. The following, fourth, answer suggests that this individual probably does not have any study habits or strategies and, therefore, would enhance their studying by doing so. The subsequent answer indicates that the student wants to have diversity during their studying and does not want to focus on one topic for too long. At the same time, they also admit that they procrastinate. A possible approach to this problem might be to plan shorter, more varied study sessions where the subject is changing. The last answer can be considered very common among today's students. As mentioned earlier, it could be helpful for the student to set more manageable tasks that would also be less time-consuming.

Table 8. Do you think that with better self-evaluation you would be more motivated to learn?

Answer	Number	Percentage
No, I am more motivated when I am interested in the topic	14	28%
Rather yes, but it would not be the main factor	12	24%
Yes, it is easier to begin studying when I feel confident about my abilities	8	16%
No, I do not think it is important	6	12%
I do not need better self-evaluation; I am doing it right	5	10%
Yes, I could schedule my studying better	5	10%

In Table 8, 28% of students think that better self-evaluation would not enhance their motivation to learn, but it is the interest in a topic that motivates them the most. However, this approach might limit the range of subjects that would prove to be useful in the future, even though these students might not be interested in them at the given moment. On the other hand, 24% of respondents think that it would help them to be more motivated, but at the same time, it would not be a main factor affecting their motivation to learn. Such factors might be interest in the subject, as mentioned earlier, or learning strategies. 16% of students are confident about their abilities to study, claiming that they have an effective self-assessment and that it helps them to start learning more easily. This highlights the importance of self-efficacy, as explained in Chapter 2.1. 12% of respondents believe that self-evaluation is not important, regarding the motivation to learn. This might be caused by the unawareness of the benefits of such a concept. These students may be more motivated by external rewards, such as grades or deadlines, which are directly linked to extrinsic motivation, as discussed previously. However, that does not mean that such students cannot enjoy the learning itself. Only 10% believe that they do not need to have better self-evaluation. This confidence in their abilities suggests that these students know their strengths and weaknesses, which may help them to effectively plan their studies. It may also reduce the stress related to academic responsibilities and

such individuals might even enjoy their studies. The other 10% believe that better self-assessment could help them better schedule their studies. This claim underlines a good foundation of self-awareness, as these students understand the importance of self-evaluation and the benefits that it might provide.

Table 9. How do you respond to negative feedback?

Answer	Number	Percentage
It depends on who is doing the criticism	22	44%
I see it as an opportunity to improve	13	26%
It bothers me if it is delivered vulgarly or without respect	7	14%
It depends on whether it is said to me in public or in private	5	10%
Criticism makes me uncomfortable and demotivated	3	6%
It makes me angry, I tend to react defensively	0	0%

In Table 9, it is shown that the largest group of students stated that their response to criticism largely depends on who is doing the criticism. That means that such students give great value to the relationship with the person giving the negative feedback, which then affects how they react and process the criticism. This approach, however, can be taken as biased, as these students might undervalue certain criticism from somebody they, for example, do not like, potentially missing out on useful perspectives on the topic. On the other hand, 26% of respondents see negative feedback as a way to improve. This approach can be considered highly beneficial, as these students may see challenges and obstacles as opportunities to improve, which can be linked to a good start for self-directed learning, as explained in Chapter 1.2. 14% of students suggest that they do not like the way the negative feedback is given. Criticism may differ from one to another, and it is not always constructive, as some people just want to offend instead. However, even if the feedback is valuable, it can lead to negative emotional responses if it is delivered offensively and disrespectfully, as the person will not try to understand the content of the feedback. 10% of students indicate that they may be more comfortable receiving negative

feedback in private, rather than in public. The latter might be perceived as humiliating and embarrassing, while the private feedback might be perceived more easily. 6% of students do not respond well to negative feedback, as it makes them uncomfortable and demotivated. Such students might take the feedback too personally and reflect it on their self-worth.

Table 10. What is the most important aspect for you to gain more confidence in learning/performing tasks? Please rank from the most important.

Answer	Importance on Average	Representing
Praise from a more experienced person/person I look up to	1.68	Verbal Persuasion
Observing more experienced people perform a given task	2.16	Role-Modelling
Dividing a large task into smaller, simpler parts	2.16	Self-Mastery

In Table 10, three aspects regarding gaining confidence in learning are ranked from the most important to the least important. This question was specifically designed to correlate with three key sources of self-efficacy, as explained in Chapter 2.1. As shown in Table 10, the first answer represents verbal persuasion, the second represents role-modelling, and the last is self-mastery. However, Bandura's theory of self-efficacy ranks the most influential source of self-efficacy as self-mastery, which is perceived as the second or third most important strategy by the respondents (Heslin 706). This highlights the importance of external validation for the students and might also indicate their lower self-confidence regarding their studies.

Table 11. Should teachers instruct students on how to study better?

Answer	Number	Percentage
Yes, they should present different methods and strategies to the students, but the decision should be up to the students	29	58%
No, everyone should find their own way	10	20%
Yes, most students do not know how to learn effectively	9	18%
No, it could lead to a lack of motivation and reduced interest in learning	2	4%

In Table 11, it is shown that the vast majority of respondents think that teachers should teach students how to learn better, but the decision on which method they would use should remain with the students. This approach supports the autonomy of students and indicates that each individual should pick the method that they think is most appropriate for them. On the contrary, 20% of respondents think that everyone should find their own way of studying rather than rely on teachers. However, students may also follow methods that are not as effective, which might undermine and slow their learning progress. 18% believe that most students do not know how to learn effectively. This may indicate that such respondents think that teachers can help students find better study habits, effective time management skills, and enhance their overall study performance. A small percentage of students believe that teaching students how to study better might lead to a lack of motivation, as some may feel pressured to learn by given methods, which may eventually lead to reduced interest in learning.

Table 12. Have your teachers ever advised you on how you should learn?

Answer	Number	Percentage
Yes, sometimes	29	58%
No more than once	16	32%
No, never	3	6%
Yes, often	2	4%

As shown in Table 12, the majority of students were sometimes advised by their teachers on how they should learn. This information indicates these students were provided with some ideas on how to learn more effectively. That may serve as a good start for self-educating and might encourage students to focus on enhancing their learning strategies, as it would make their studies less challenging. Nevertheless, that does not mean that these students followed the advised strategies. 32% reported receiving such advice only once, which probably means “not that often.” This suggests a lack of support from the teacher regarding guidance on effective learning strategies. A small group of 6% stated that they have never received advice from their teachers on how to learn. Such students might struggle with finding proper study strategies, as they may not be familiar with any proven approaches. Lastly, only 4% of respondents stated that they received advice from their teachers more often. Such support from their teachers might be very beneficial to students’ performance, as they can try different strategies.

Table 13. If your teachers advised you, at which school did this happen most frequently?

Answer	Number	Percentage
High School	25	50%
Primary School	13	26%
College	9	18%
They did not give me any advice	3	6%

According to Table 13, half of the respondents were advised the most during high school. This may occur because such teachers want to prepare students for increased study demands at college. The second most selected answer was primary school, where teachers probably want to set decent study habits that would eventually form a great foundation

for students' future studies. 18% of respondents reported that they were advised the most at college. These teachers might provide more advanced study strategies, supported by their experience with such strategies. Lastly, 6% of students reported not receiving any advice during their studies. Such students are discussed in the paragraph above.

Table 14. Was it useful for you? (see Table 13.)

Answer	Number	Percentage
Rather yes, I have taken advice on some things and have not changed some of my strategies	32	64%
No, I preferred to learn by myself	14	28%
No, it did more harm than good. How?	2	4%
No, by that time I already knew how to learn well	1	2%
Yes, it made me learn better	1	2%

According to the data in Table 14, 64% of respondents stated that advice they got from their teachers was rather useful to them, but they did not change some of their existing learning strategies. Such students chose new strategies that they believed were right for them, while they remained using strategies that have proven to be useful and effective for them. This indicates a balanced approach regarding external guidance from teachers. 28% of students stated that they prefer to learn individually and arguably did not find guidance from their teachers useful for their studies. Such students might prefer autonomy regarding their studies. However, these students may choose ineffective ways to study, which might subsequently undermine their study progress. Two individuals stated that previous guidance from teachers did more harm than good, which was also an open-ended question. One answer did not contain valuable data and is thus considered irrelevant. The second answer was, "Specific learning disabilities require specific methods of learning, nothing general works for me." This emphasises how important the special approaches to learning are, making the more general strategies less useful. The other 2% of respondents stated that they were already confident in their learning strategies when they were advised on how to learn. These students think that they use effective study methods and do not require further guidance. Nevertheless, it may be beneficial to try new learning strategies, as they may contain effective methods to enhance studying.

Table 15. What motivates you to study?

Answer	Number	Percentage
Knowing that I have made progress / that I will learn something new	15	30%
Fear of an upcoming exam/test	12	24%
A chance to stand out, to be better	9	18%
Adequate task difficulty	8	16%
Rather nothing, I study because I have to	5	10%
Expected reward (candy, being on my phone, a walk, etc.)	1	2%

Table 15 contains data regarding the motivation behind studying. 30% of respondents stated that what motivates them the most is knowing that they have made progress or that they have learned something new. This is tightly connected to intrinsic motivation, which can be defined as an enjoyment of learning and gaining new knowledge, as more thoroughly explained in Chapter 4.1.1. 24% of students stated that the fear of an upcoming test motivates them the most. This fear of failure can be a powerful motivation, as mentioned previously regarding the method of cramming. However, students motivated by fear of failure might focus solely on short-term goals, and that could potentially lead to overwhelming amounts of responsibilities, which may cause increased stress in students' lives. 18% of respondents identified the chance to stand out and be better as their main motivation. This may indicate both intrinsic and extrinsic motivation, as these students want to learn more and also be recognised for their efforts, while the latter would represent extrinsic motivation. 16% of students reported adequate task difficulty as their primary motivation factor. Connected to this is the ability to self-evaluate, which helps the individual to better understand their strengths and weaknesses. When students find the task too challenging, it may demotivate them, and they will not want to even start the given assignment. Dividing the task into smaller, more achievable steps might motivate them, as they could see the progress behind their effort. This was mentioned earlier as a self-mastery. 10% of respondents study because they have to, and that is their main motivation. This can be associated with the fear of an upcoming test or exam, where the main motivation is the pressure before the exam, which represents

extrinsic motivation that plays a pivotal role. Lastly, 2% of students are motivated by some expected reward, which can be considered the definition of extrinsic motivation.

Table 16. How is your motivation manifested?

Answer	Number	Percentage
I start studying something I do not enjoy, but I need to	25	50%
I can study for longer periods of time	20	40%
I look for more information and resources to expand my knowledge	18	36%
I enjoy studying more	17	34%
I make a study plan and I stick to it	7	14%

As shown in Table 16, where students could select multiple answers, half of the respondents stated that their motivation leads them to start studying something, even though they do not want to. This indicates a strong will and the ability to prioritise what is essential for the student's studies. Such students understand the importance of individual tasks and might benefit from planning their study sessions if they do not already do so. 40% of students reported that they can study for longer periods of time when motivated. Being able to maintain focus for longer study sessions can lead to a better understanding of the studied material, but the individual has to recognise if they are being focused and not only staring at the pages without truly studying the topic. 36% are researching the topic by seeking additional information related to the topic. This can be considered self-learning, as such students want to learn something extra. Such motivation is a good example of intrinsic motivation, as these students enjoy the learning itself and are curious to study more. This is tightly connected to the subsequent answer, where 34% of respondents enjoy studying more when they are motivated. 14% of students show effective time management and organization skills, as they are able to organise their study sessions and stick to them afterwards.

Table 17. What demotivates you to learn?

Answer	Number	Percentage
Lack of interest in the topic or subject	39	78%
Difficulty of the topic	27	54%
Unreasonable demands from the teacher	23	46%
Lack of time due to other commitments or activities	21	42%
The feeling of not being able to learn so much information	20	40%

In Table 17, where students could select multiple answers, 78% of respondents stated that what demotivated them the most was their lack of interest in the topic. This suggests that these students find relevance crucial to their motivation, and they do not want to spend time studying something they do not enjoy or are interested in. As discussed in the paragraph describing Table 8, such approach might not be beneficial for the students in the long term, as they sometimes have to learn something they do not want to, even though it may be valuable for them in the future. 54% of respondents are most demotivated by the difficulty of the topic. Such students might benefit from dividing the task into smaller, more achievable steps or planning their studying schedule according to the difficulty. 46% believe that what mainly demotivates are the unreasonable demands from teachers. That could lead to increased stress from too high expectations from teachers. However, it might be possible that students sometimes find such demands unreasonable because of poor time management skills and inefficient learning strategies. This reason is linked to the subsequent answer, which was selected by 42% of respondents. For these students, lack of time due to other activities demotivates them the most. As mentioned above, this problem may arise due to poor time management skills. More frequent and effective planning might greatly enhance the academic experience of such students. 40% of respondents feel that they would not be able to learn the amount of information that they are expected to learn. Better self-evaluation might help these students address their strengths and weaknesses and, subsequently, help them schedule their study sessions according to their skills and needs.

Table 18. How is your demotivation manifested?

Answer	Number	Percentage
I procrastinate and do nothing for school	37	74%
I get distracted easily while studying	35	70%
I am postponing all tasks until the last minute	31	62%
I have unpleasant feelings associated with school (anxiety, stress, etc.)	18	36%
I do not trust my abilities to learn the given subject	13	26%

The data in Table 18, where students could select multiple answers, shows how demotivation manifests among students. The most common problem is procrastination. This suggests that they try to avoid studying, which eventually leads to increased stress and the accumulation of responsibilities. As discussed in the paragraph regarding Table 7, making learning more engaging and finding new learning methods might be useful, as it would make their studying less time-consuming. 70% of respondents stated that they get easily distracted while studying. This suggests that the lack of motivation makes it more difficult for students to remain focused. There are many distractions available to every student, but the main source may probably be the mobile phone. In order to avoid such distractions, students may turn off their notifications and place the phone at a distance. In addition to that, a useful thing to do would be to dedicate a special place solely for studying, so when the individual visits the selected place, it is mentally associated with learning. 62% of students reported postponing all tasks until the last minute. This can be considered as procrastination, but mainly, such students may tend to work under lot of pressure and use the cramming method to right before the exams, in order to learn a significant amount of information in a very short period of time. 36% of respondents associate school with unpleasant feelings. Such feelings may have accumulated throughout the entire studies, which could be related with increased stress or even dissatisfaction with the chosen programme. 26% of students do not believe in their abilities during studying. This may be caused by past struggles with their studies, such as failing difficult subjects. These individuals might benefit from focusing on their weaknesses and modify, or possible change, their learning strategies.

Table 19. What are your motivational strategies - how do you "force" yourself to learn something you are not motivated to learn?

Answer	Number	Percentage
I listen to music	20	40%
I think about the free time that comes after completing a task	18	36%
I take a "learning-enhancing" substance - caffeine, nicotine, etc.	16	32%
I organize my work environment	14	28%
I have no motivational strategy	11	22%
I go to the gym	10	20%
I play a musical instrument	5	10%

The data in Table 19, where students could select multiple answers, shows what motivational strategies students use to "force" themselves into learning something they do not want to. The most popular strategy was listening to music. These students might listen to music in order to calm down and prepare themselves to start studying. Some individuals might listen to a specific type of music to remain focused, and others may play songs to avoid being interrupted by background noises. 36% of respondents think about the free time that comes after completing the task. As students have something to look forward to, it may help them study more effectively, and the task might seem less challenging. Some individuals may even plan their study sessions more often than others to have more free time. 32% of respondents use substances like caffeine and nicotine to temporarily increase their energy and start learning more easily. Such substances are also used to increase concentration and may be used primarily while cramming. 28% of students stated that they organise their work environment to motivate them to learn. This may be useful, especially in order to remove possible distractions so these individuals can stay focused. 22% of respondents reported that they have no motivational strategies. Such students may procrastinate much more often, as they have no strategies to motivate them to study something and might associate studying with stress and anxiety. 20% of respondents stated that they exercise, which may elevate their mood, reduce stress, and increase energy. Lastly, 10% of students reported playing a musical instrument before

studying. This may serve as a mental break or even as a tool to start focusing and transition into studying after an enjoyable activity.

6. CONCLUSION

The aim of the theoretical part of this thesis was to comprehensively explain the concept of self-directed learning and the important aspects connected to it. As this concept is rather extensive, this thesis first is focused on some of the most influential milestones that impacted the evolution of SDL, picked thoroughly to be able to understand the roots of this phenomenon that are often connected to familiar matters. Theories after that provided different views on SDL to broaden the horizons of this concept while indicating more interpretations.

The examination of self-evaluation and its processes highlighted the significant role in self-learning and helped to understand the concept more deeply, as well as underscoring the important impact in attaining various skills.

In the third chapter, the crucial role of a teacher in promoting self-learning was explained, emphasizing the importance of individual approaches to different students. After the explanation of the SSDL model, its complexity revealed that this approach is not yet as widely employed in today's education as it should be, pointing to possible research that might be done on this topic.

The subsequent chapter focused on the importance of motivation, with a focus on Self-Determination Theory and its components. Intrinsic and extrinsic motivation were examined, explaining the importance of personal enjoyment and external rewards that play a major role not only in education but also in our daily lives and everyday decisions. This was followed by the factors that influence motivation, which revealed the significance of parent involvement, teacher enthusiasm, and personal interests and experiences. These factors contribute to shaping a learner's engagement in their educational journey and may have a great impact even from an early age.

The exploration of self-learning and its concepts in theoretical part of this thesis unveiled its major beneficial aspects, highlighting the need for broader awareness and usefulness in education and everyday life. The significance and comprehensiveness of SDL should be better and more commonly known, as it offers ideas that may greatly enhance individuals' self-education. Supporting this claim are the results of the questionnaire, described in the practical part of this thesis, which indicate major

advantages in focusing on one's learning strategies as well as implementing the SDL in their everyday life.

The practical part focused on the analysis of how students usually study, what affects their studies, and exploring different ways to improve their learning strategies. It dealt with significant factors causing the ineffectiveness of students' studies and highlighted motivation as a key aspect of not only self-learning but also learning itself, as already stated in the theoretical part. The aim of the practical part was to explore the awareness of self-learning in students' lives and promote this concept through a questionnaire that might have offered different points of view on certain problems and potentially encouraged the respondents to enhance their studies. The results showed that many students tend to study regularly but would benefit from having better learning strategies that teachers could help them with. That would serve as a good basis for starting self-education, as it is not commonly practised among the respondents. Most of the respondents are easily demotivated when they lack interest in certain topics that they should learn, and connected to that is procrastination, which appears to be a major problem for most of the students. Many students undervalued the self-evaluation, even though it is a valuable factor in their development. On the other hand, intrinsic motivation was shown to be the primary motivation in respondents' studies, which is based on the fact that they want to learn more and might eventually enjoy the process of learning.

To conclude, this research provided insights into students' motivations, their learning methods, their ability to self-evaluate, and underlined the importance of teachers in students' study progress. The data indicates many outcomes that could be associated with self-learning and, at the same time, highlights the benefits of self-directed learning. It also discusses major setbacks in students' learning, which may serve as valuable information not only for students but for teachers as well, as they might alter their strategies accordingly.

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SYMBOLS AND ABBREVIATIONS

Abbreviations:

FEEC	Faculty of Electrical Engineering and Communications
BUT	Brno University of Technology
SDL	Self-Directed Learning
SSDL	Staged Self-Directed Learning (Model)
SDT	Self-Determination Theory
ELT	Experiential Learning Theory

APPENDIX

- 1) How often do you study during the semester? Whether it is practising or studying something new (doing homework does not count).
 - Several times a week
 - Just before the exams (in the examination period)
 - Every day

- 2) Do you make a study plan?
 - No, not at all
 - Yes, I try to plan at least the next day
 - Only in the examination period
 - Yes, I plan my whole week
 - Other

- 3) Are you interested in the topics of your current studies?
 - Rather yes
 - Yes
 - Rather no
 - No
 - Other

- 4) Do you study something extra than necessary for your regular classes?
 - Yes, I like to learn something extra
 - No, I am not that interested
 - No, I do not have time for it
 - Yes, it will help me in my future studies

- 5) Is the information acquired at school sufficient for your studies?
 - Rather yes, I only look up things I do not understand
 - Not really, I often have to study unexplained material
 - No
 - Yes

- 6) Can you estimate how much time do you need to learn something?
- Rather yes, I usually manage to learn everything on time
 - Rather no, I often feel that my knowledge is inadequate
 - It surprises me that it is taking me longer than I expected
 - I make a plan, but I often do not stick to it. Why? (answer in the following question)
 - Yes, I know how much time I need to learn
 - I am not planning anything; I am hoping that I will somehow learn it right before the exam (successfully or unsuccessfully?)
- 7) I make a plan, but I often do not stick to it. Why? (from question 6)
- (Answers from the students)
- Reluctance to study, I prefer to do anything else that I enjoy more
 - I get distracted by my surroundings
 - Because I often postpone it till "tomorrow"
 - I am a lazy person; I did not study much in high school, and I am not used to studying at home
 - I do not like to spend too much time on one topic, I want to do other things. I also procrastinate
 - Because I procrastinate
- 8) Do you think that with better self-evaluation you would be more motivated to learn?
- No, I am more motivated when I am interested in the topic
 - Rather yes, but it would not be the main factor
 - Yes, it is easier to begin studying when I feel confident about my abilities
 - No, I do not think it is important
 - I do not need better self-evaluation; I am doing it right
 - Yes, I could schedule my studying better
- 9) How do you respond to negative feedback?
- It depends on who is doing the criticising
 - I see it as an opportunity to improve
 - It bothers me if it is delivered vulgarly or without respect
 - It depends on whether it is said to me in public or in private
 - Criticism makes me uncomfortable and demotivated
 - It makes me angry, I tend to react defensively

10) What is the most important aspect for you to gain more confidence in learning/performing tasks? Please rank from most important.

- Praise from a more experienced person/person I look up to
- Observing more experienced people perform a given task
- Dividing a large task into smaller, simpler parts

11) Should teachers teach students how to study better?

- Yes, they should present different methods and strategies to the students, but the decision should be up to the students
- No, everyone should find their own way
- Yes, most students do not know how to learn effectively
- No, it could lead to a lack of motivation and reduced interest in learning

12) Have your teachers ever advised you on how you should learn?

- Yes, sometimes
- No more than once
- No, never
- Yes, often

13) If your teachers advised you, at which school did this happen the most?

- High School
- Primary School
- College
- They did not give me any advice

14) Was it useful for you? (see question 13.)

- Rather yes, I have taken advice on some things and have not changed some of my strategies
- No, I preferred to learn by myself
- No, it did more harm than good. How?
- No, by that time I already knew how to learn well
- Yes, it made me learn better

15) What motivates you to study?

- Knowing that I have made progress / that I will learn something new
- Fear of an upcoming exam/test
- A chance to stand out, to be better
- Adequate task difficulty
- Rather nothing, I study because I have to
- Expected reward (candy, being on my phone, a walk, etc.)

16) How does your motivation manifest itself?

- I start studying something I do not enjoy, but I need to
- I can study for longer periods of time
- I look for more information and resources to expand my knowledge
- I enjoy studying more
- I make a study plan and I stick to it

17) What demotivates you to learn?

- Lack of interest in the topic or subject
- Difficulty of the topic
- Unreasonable demands from the teacher
- Lack of time due to other commitments or activities
- The feeling of not being able to learn so much information

18) How does your demotivation manifest itself?

- I procrastinate and do nothing for school
- I get distracted easily while studying
- I am postponing all tasks until the last minute
- I have unpleasant feelings associated with school (anxiety, stress, etc.)
- I do not trust my abilities to learn the given subject

19) What are your motivational strategies - how do you "force" yourself to learn something you are not motivated to learn?

- I listen to music
- I think about the free time that comes after completing a task
- I take a “learning-enhancing” substance - caffeine, nicotine, etc.
- I organize my work environment
- I have no motivational strategy
- I go to the gym
- I play a musical instrument