

AGNIESZKA SZPLIT

Jan Kochanowski University in Kielce

ORCID – 0000-0002-5756-6393

EWELINA RZOŃCA

Cardinal Stefan Wyszyński University in Warsaw

ORCID – 0000-0002-6434-9207

SELF-REGULATED LEARNING STRATEGIES OF PRESCHOOL AND EARLY EDUCATION PRE-SERVICE TEACHERS*

Introduction: The basis of professional development is the ability to manage one's own learning process. Therefore, it is so important for future teachers to develop this skill during their studies so that they can achieve professional success and pass on knowledge in this area to their students.

Research Aim: The aim of this research is to determine what strategies regulating the learning process are used by pre-service teachers – to improve their academic achievement.

Research Method: The research is qualitative. The questionnaire was created on the basis of Oxford's typology of learning strategies, the concept of self-directed learning by Paris and Paris, Ledzińska and Zimmerman's description of self-regulated learning strategies.

Results: The analysis of the obtained results allows to determine the existence of four types of self-regulated learning strategies among preschool and early education pre-service teachers. Students mainly use organizational and supervising strategies. Students have the least experience in applying social strategies for learning together and affective strategies to cope with stress.

Conclusion: There is a great need to educate students how to use and develop self-regulated learning strategies that can be transmitted to learners. It is especially important to pay more attention to social and affective strategies during pedagogical studies, as they are weakly-developed, but crucial to cope with stress and develop the ability to work in a group during pedagogical studies.

Keywords: self-regulated learning, learning strategies, preschool and early education, pre-service teacher

* Suggested citation: Szplit, A., Rzońca, E. (2025). Self-Regulated Learning Strategies of Preschool and Early Education Pre-Service Teachers. *Lubelski Rocznik Pedagogiczny*, 44(3), 89–103. <http://dx.doi.org/10.17951/lrp.2025.44.3.89-103>

INTRODUCTION

In the 21st century, knowledge in specific subjects, i.e. learned knowledge, often becomes redundant and obsolete. Nowadays, the skills of independent learning, managing the process of learning about the world and self-education are much more needed. One of the eight core competences that the European Union's Commission for Education and Culture considers essential for lifelong learning is "learning to learn", i.e. the ability to learn independently (European Commission, 2018). Lifelong learning and self-improvement skills are particularly essential for teachers to constantly adapt to a rapidly changing world. Throughout their work, teachers must keep up with changes in the learning and teaching process. To develop these skills, teachers not only need to plan their learning independently, but also consciously and carefully regulate their learning.

The concept of self-regulated learning emerged in the 1980s as a result of the spread of socio-cognitive theory. Self-regulated learning is an expression of a learner's attempt to control social factors to achieve their own learning goals (Chansri et al., 2024). Now it is a kind of an umbrella term to designate various processes, including the setting of educational goals, metacognition or various forms of independent learning (Boekaerts, 1999; Paris & Paris, 2001; Zimmerman, 1989). Very often, self-regulated learning is also compared to self-directed learning. In both cases, researchers talk about the learner setting goals and the analysis of the tasks he or she performs, as well as about the selection of strategies and self-assessment of the facts obtained (Loyens et al., 2008). However, self-regulated learning is seen by researchers as a narrower concept, due to the student's lack of choice of learning content and the inability to critically evaluate the materials used to acquire knowledge (Loyens et al., 2008).

Self-regulation in learning includes the student's activity related to planning the learning process, supervising its course and regulating behaviour (Ledzińska, 2000), motivating and applying adequate learning strategies (Dembo, 1997). Oxford (1990) presents six basic types of learning strategies divided into two groups: 1) indirect strategies: metacognitive – support organizing, focusing, and evaluating own learning; affective – help create positive feelings and motivate yourself to learn; social – help learners interact with others; and 2) direct strategies: cognitive – help learners construct, transform and apply scientific knowledge; memory – support students in entering information into memory and retrieving it; and compensation – support overcoming deficiencies in knowledge. Self-regulating learners are metacognitively, motivationally, and behaviourally active (Zimmerman, 2013) and they monitor, regulate and evaluate their own learning, plan educational activities and introduce appropriate strategies to modify the learning process (Ciechanowska, 2009), which increase the probability of achieving the goal (Zimmerman, 2015).

Psychological and pedagogical research confirms that educational programs in which training is introduced to develop regulatory strategies of the learning



process bring many benefits to students (De Corte et al., 2011) in various educational contexts (Czerniawska, 1999; Schunk & Zimmerman, 1994). The presence of strategies regulating the learning process is sometimes claimed to be a predictor of high academic performance (Minnaert & Janssen, 1999), but differentiated self-regulation of students is seen in different fields of study (Dębska et al., 2008). The development of learning strategies can also be a prerequisite for learners' performance of tasks, for example, in problem-based learning (Loyens et al., 2008). Oxford (2017) considers them to be the "soul of learning strategies" and creates clear links between learning strategies (in this case, language) and self-regulation, seen as "a dynamic construct linking the strategic abilities, intentions and behaviours of learning within the self-regulated learner" (p. 169).

Self-regulation of the learning process has a positive effect on its outcomes (e.g. Ruohoniemi & Lindblom-Ylänne, 2009; Singleton-Jackson et al., 2010), but university students often have problems taking responsibility for their own learning (Elliott, 2010). As Nilson (2013) points out, "learning was something that happened to them, not something they had control over" (p. 2). Learners often do not know how to organize the learning process effectively, are not aware of learning styles, and do not know how to improve their memory (Nilson, 2013). The situation might cause huge problems for future teachers, because they will be expected to support the learning process of their future students.

RESEARCH AIM AND QUESTION

The aim of the presented research is to determine what strategies regulating the learning process are used by pre-service teachers in order to improve their academic achievements. The exploration of typical self-regulatory learning strategies will allow academic curricula to be enriched with content that prepares future teachers to develop self-directed learning strategies in their own students. The research problem is expressed in the question: What strategies regulating the learning process are used by preschool and early education pre-service teachers?

Due to the exploratory nature of the research, no specific problems were created. It was not possible to assume in advance what strategies would be discovered by the research and how they could be characterized.

RESEARCH METHOD AND SAMPLE CHARACTERISTIC

Due to the multitude of different behaviours of learners and the lack of possibility to objectively examine their learning strategies, studying learning strategies is quite a challenge. Therefore, researchers have been looking for a wide variety

of research methods and techniques for years. There are different research tools used depending on the theoretical approach to self-regulated learning strategies (Winne & Perry, 2000):

- 1) tested as skills: self-assessment questionnaires, containing a certain number of statements to be assessed on a scale from 1 to 5; structured interviews;
- 2) treated as situations: studying thinking aloud, studying mistakes and reactions to them, examining notes and markings in the text, observing the behaviour of learners.

The authors of the article decided to integrate the two approaches and prepared their own research tool, which required students to self-evaluate their own learning strategies and describe specific strategies occurring in given situations. As a result, the researchers explored self-directed learning and, and at the same time, it was the respondents who decided which situations are important and what their self-regulatory strategies are. An unquestionable advantage of this tool is the ability to collect information from the students themselves and understand their interpretation of the situations they describe. At the same time, the researchers avoided imposing a closed cafeteria of behaviours and predetermined learning strategies on the respondents.

The diagnostic survey method was used. The authors prepared a questionnaire concerning seven research areas, with open-ended questions referring to the way pre-service teachers learn. The theoretical basis of the prepared tool was the typology of learning strategies by Oxford (1990), the concept of independent learning by Paris and Paris (2001) and Ledzińska (2000) and the description of self-regulated learning strategies by Zimmerman (2015). The survey areas and questions and their reference to various concept from the literature are presented in Table 1:

Table 1.
The questions and their reference to learning strategies concepts

Survey areas and questions	Ledzińska (2000)	Oxford (1990)	Zimmermann (2013, 2015)	Paris and Paris (2010)
ORGANISING LEARNING How do you organize your learning process (e.g. planning your work, ways to focus your attention, monitoring your progress)	Planning	Metacognitive strategies Cognitive strategies	Metacognitive actions	Cognitive strategies Metacognition
SOURCE OF KNOWLEDGE What sources of knowledge are most important to you? Where do you get the information that you need? How do you select these materials?				

METHODS	Supervising the process	Memory strategies	Behaviour	Task engagement
What methods do you use to understand content, remember content, or learn a large portion of material?		Compensation strategies		
Describe your most effective method for memorizing				
SOCIAL LEARNING		Social strategies		Social supports
What is your opinion about learning with another person, about learning together. Do you use this way of learning? If so, what learning strategies do you have in common?				
GROUP SUPPORT				
Do you take any advice from older students, academic teachers, or other people? What kind of advice is that?				
EMOTIONS	Regulating behaviour	Affective strategies	Motivational actions	Motivation
How do you manage stress?				
MOTIVATION				
How do you motivate yourself to act, what motivates you to act?				

Source: Authors' own study.

The research was carried out in 2023 among students of preschool and early school education at two universities: Jan Kochanowski University of Kielce (UJK) and Cardinal Stefan Wyszyński University in Warsaw (CSW), where the authors work. All participants (117) were women aged 20–23, studying in the 2nd and 3rd year (UJK) and in their 4th and 5th year (CSW). The research group was selected by convenience, because the exploratory nature of the research allowed this kind of sampling.

The students were invited to take part in the research by different teachers from both universities and attended the research of their own free will (they could easily leave the meeting) as it was not included in the course that the authors provide at their universities. The participants were not only the students of the researchers and the research was anonymous. They were informed about the research aims and procedures by the researchers and could ask questions all the time during the meeting. However, some participants left the meetings very quickly or left the questionnaires blank, and the researchers decided to use only the fully completed questionnaires ($n = 100$ questionnaires, 60 from UJK and 40 from CSW). They created a special table that allowed them to arrange the findings. Each survey question was analysed separately and both researchers wrote down the quotations assigning them to a specific code. For the qualitative analysis the authors coded the questionnaires individually and later compared their ideas, negotiated the codes and classified the quotations. For the quantitative analysis the numbers of quotations and answers finally assigned to a specific code were counted.



RESULTS

The researchers decided to follow the quantitative procedures of data analysis. The codes and categories were created on the basis of the material and the numerical indicators provided only some additional information. For each category below, we selected the most distinctive quotes from students describing their self-regulated learning strategies. Based on the collected research material, it can be stated that there are four types of self-regulated learning strategies:

- 1) organizing strategies, including planning and organizing one's own learning process and identifying appropriate educational resources,
- 2) strategies supervising the learning process – i.e. the strategy of choosing a learning technique,
- 3) social strategies, including collective learning and authority choice;
- 4) affective strategies, i.e. coping with stress and motivating oneself to act.

Self-organizing strategies include the strategy of independent planning and organization of the learning process and identifying sources used in learning.

The first type of strategy is self-organization of learning (planning own learning). The students from both universities very often mentioned planning their activities: 26 people (out of all 100 people who described their self-regulatory strategies in this area) create *To-Do lists*, using calendars. The determinant of the order of implementation is usually deadline, degree of difficulty of tasks and the amount of time that should be spent on completing the task, e.g. *I note down all the things I have to do with the due dates. I start with the work that I have to do as soon as possible. I try not to leave it until the last minute* (no. 17); *I plan specific hours and topics to work on* (no. 8); *From the most difficult to the easiest* (no. 6); *On my day off from university, I plan my studies* (no. 4). The students sometimes also mentioned their own system of taking notes for learning (9 people) and dividing the material into smaller, meaningful parts (5 people).

To improve the organization of learning, the future teachers pay attention to their own ways of concentrating. Most people (15 out of 100) emphasized that they had to learn in silence, so they used muting headphones (no. 17) and focused on eliminating “distracters”, which, in their opinion, are the phone or TV (*Turning off notifications on my phone*, no. 93); *I remove objects that distract i.e. the phone* (no. 90); *I turn off the TV, laptop, plug in the phone to charge* (no. 98); *I'm turning off my phone* (no. 99). In turn, 12 students indicated that listening to music (in the background or in headphones) helps them focus on learning. The future teachers paid much attention to arrange their workspace. For 9 students, it is important to prepare a place to study, and for 6 students, order is of the greatest importance. *For the time of studying, I put aside everything that could distract me* (no. 8); *I'm airing the room* (no. 91).

However, some (8) people claimed they were never able to control learning, which confirms Nilson's (2013) results. Among the causes of the difficulties they

mentioned: procrastination, poor division of tasks or need to learn only theoretical issues without connection with real life (*Theoretical things come to me with difficulty, despite the plan. Practical things come easily to me* (no. 13); *It's hard for me to plan my work, I usually do several things at the same time* (no. 20)). To sum up- most future teachers plan their learning process and know their own ways of focusing their attention, and only a few admit to difficulties with organizing their own work.

Another strategy for self-regulated learning is identifying appropriate learning resources. Most students (43 out of 100) get their information from the Internet (*There I can find answers to everything* (no. 53) – but they claim to select and use only so-called “trusted sources” (no. 53). However, there is no information about what criteria are used for selection of information. Most people use the Google scholar database, i.e. scientific publications in the online version, and it is important for them to select reliable materials, or previously known websites or to check the information in various sources. *I select information* (no. 1, 11); *books/articles posted on the Internet, but I always check if it is scientific material* (no. 5); *I always find all the necessary materials on the Internet. I take into account articles and reliable websites* (no. 6); *always on several pages to check their similarity* (no. 7, 10, 26).

Books are in second place in the ranking of sources used by students. They were mentioned by 25 people, out of 100 people who described their strategies for self-identifying sources. The pre-service teachers borrow publications from the library, buy books or take photos of the necessary content. *I have to buy, I don't like borrowing* (no. 3); *I believe that books contain the most valuable information, but there is not always time to borrow them* (no. 4). What is more, the students also emphasized that they often rely on teachers/lecturers' opinions concerning the books and articles. Among the educational sources mentioned by the students were also their colleagues' notes and conversation with them and GBT chat.

The only supervisory strategy regulating the learning process described by the students is selecting appropriate learning strategies.

Selection of appropriate self-regulating strategies, which result from the individual needs and abilities of the learner, is very important. The students most often use the organizing strategy, which is classified as a cognitive strategy (Dembo, 1997). They make colourful notes or mark the most important information in the text (23 people), and, e.g. create mind maps (4 people). The second and third popular strategies are repetition strategies (Dembo, 1997) such as reading aloud (18 people) and individual “quiet” repetition (16 people).

It is worth adding that students are often aware of their own learning style that gives them a better chance to learn better, e.g. *I am a visual learner* (no. 54, no. 86); *I am a visual learner, so I need clear order and circle the most important information; I have a very good visual memory; when studying, I mark the most important information with colours. I divide the material into several parts and learn in parts. I read*

a given part of the material aloud, while reading I try to associate the material with things, sometimes absurd, but then it is easier to remember the material (no. 27); *I prefer more complex notes from various tables and charts, because I am a visual learner* (no. 83).

The pre-service teachers (8 people) also use the strategy of elaboration (mnemonics, and analogies), and associations during learning (e.g. *I try to associate the material with things, sometimes absurd, but then it's easier for me to remember the material* – no. 56). The students mentioned combining learning with movement, dividing the material into parts, flashcards and rote learning. The students most often use cognitive strategies (organizing and repetition) and regularly combine their use with their learning style intentionally. They are also familiar with elaboration strategies, although they are less commonly used.

There are two important strategies of a social nature: a strategy based on networking and collective learning, and a strategy for choosing an authority who helps in making strategic decisions.

Establishing relationships and creating specific networks has a positive impact on achieving academic success (Stadtfield et al., 2019). The results of our research confirm the existence of the so-called “social learning” (Keren et al., 2020, p. 353), i.e. independent, self-undertaken, guided and organized learning, based on the work of peers in a group, in order to learn or revise the material discussed. However, this is not a dominant feature, as the majority of the students (38 out of 56 who described their group work strategy in more detail) stated that they prefer to learn on their own, because the presence of another person can distract them (e.g. *I can't concentrate and remember when studying with another person* – no. 31). One of the respondents believes that working with a peer is not a good solution, because when working in a group, *more attention is paid to the environment than to learning* (no. 97). Some also mention organizational problems resulting from, e.g., different learning paces (*I have my own pace of learning and a person accompanying me would only make it difficult for me* – no. 8). What is interesting is the opinion of one student who interpreted her need for solitude as a negative trait (*I am selfish, I prefer solitude* – no. 87). This may indicate the specificity of her social group, in which peer learning is attributed a positive value.

A slightly smaller number of people (26 out of 56) find visible benefits from learning in a group. The students often pointed to a faster pace of memorization (e.g. no. 52), which is sometimes also related to a different learning strategy, e.g. student no. 10 wrote: *I really like learning with other people, then I remember the material faster. Listening to it sometimes I will remember more than reading on my own.*

A very important advantage of working in a group, according to the students, is the possibility of exchanging valuable information, and explaining the content to each other (no. 7: *We can help each other, give us hints, which is a huge plus*; no. 6: *We mutually explain to each other content that is incomprehensible to one of the peo-*

ple, no. 53: *Sometimes others are better at dealing with some material*). The students appreciate the opportunity to have a discussion and collegial reflection (no. 88 – *then learning is about dialogue, not just definitions. First we ask ourselves questions, then we improve them*), but also the value of getting to know a different perspective (no. 100 – *we compare works and materials with friends. This can help, because someone may have something interesting to say*). Even a person who claims to prefer to work independently appreciates the opportunity to exchange information during peer learning (no. 5). As an additional benefit, some students see a faster pace of finding the materials they need (no. 6: *we look for the materials we need faster*).

The students create some “support groups” based on friendship or relationships within the student group. Although it is reported in the literature that groups are often formed a bit formally by teachers during classes (Watkins & Marsick, 2021), no such examples were found in the research. The students also did not mention any form of online cooperation with groups of people they do not know in reality. The binder of a given group is always friendship and the accompanying pleasure of being in each other’s company (no. 3: *Learning with someone else in a funny form works*, no. 2: *A very nice way to do an exam – I studied with a friend*). Group work additionally motivates students to carefully plan the learning process and *not to take too many breaks* (no. 10).

An important benefit for students is building social bonds and the opportunity to experience the learning process together. Regardless of the immediate benefits of faster memorization or disclosure of content, the mere presence of the other person is an important value for some students: *I love learning with another person. Even if we don't learn the same thing, everyone does their own things, it just makes me better to focus* (no. 7).

The presence of another person is also an external motivation of a twofold nature for the students – a motive to avoid an unpleasant situation when they do not want to *look unprepared* (no. 18), or a form of encouragement, e.g. *I am sincerely motivated by the fact that I can boast to someone about what I have done* (no. 7). Peer learning also takes the form of peer revision and joint preparation for an exam or credit. *We questioned each other and filled in the gaps in knowledge* (no. 2), *I really like learning in groups. In particular, I should revise large parts of the material, by asking each other questions, sometimes also quizzes with friends and revision questions* (no. 25), *once I have mastered parts of the material, I can exchange knowledge with a friend* (no. 87).

Within the self-regulating behaviours of a social nature, there is a strategy of choosing authority. Only 33 (out of 100) people gave the characteristics of this strategy. In most cases, the students named the people whose advice on learning they listen to. These are their teachers/lecturers, parents and siblings, friends, and people from the higher year. For the students it is particularly important to know what the lecturer pays attention to during an exam- this is the most valuable advice

(no. 96 – *I use suggestions on what material is the most important*; no. 91: *suggestions from older years on what the lecturer pays attention to*). This strategy is purely practical in nature, and can be called exam-based survival strategy, as the emphasis is on getting a credit, not on gaining knowledge and developing learning skills. Only one person (no. 1) has been reflective in such a situation and evaluates advice received from peers to know if it “makes sense”. On the other hand, a large group of the students (25) stated that they did not take any advice from other people, because they tried to learn according to their own methods, which were effective and “proven” for themselves (no. 2, 31).

What is unexpected is that the students did not mention such sources of information about learning strategies as social media. Social media seems to be an important source of knowledge and inspiration for the students, but does not provide practical advice on learning at all. Perhaps the context in which the research was conducted – academic teaching – is unequivocally associated in the minds of the students with books and authorities in the “old fashioned style”.

Discussing the affective strategies we need to mention that the students did not master the skill of dealing with stress (16 people) well. Only some felt they had their own ways to control emotions. For 14 people, it is soothing to talk to loved ones and other people, and for 12 people, listening to music is helpful. A few of the students find their own strategies to calm down, through meditation or relaxation (8). *I count to 10, close my eyes and take a deep breath* (no. 91); *I’m breathing* (no. 3, 21, 28); *Square Breath Technique* (no. 25). Some other ways of coping with stress were stress eating, physical exercise (e.g. *I’m going out into the fresh air* – no. 7) or watching TV series. Only one person replied that she was not stressed at all, while the majority of the students find it difficult to manage the stress that arises during the learning process.

Referring to their own motivation, the students paid attention to both external factors (the possibility of praise, achievement) and internal factors (striving for a goal, making dreams come true). *I am motivated by other people. I love learning with someone. I am also motivated by what achievements I gain, what knowledge I gain. And I am honestly motivated by the fact that I can boast to someone about what I have done, whether I have won an award or high grades in science* (no. 7).

Family and friends, and other people are “motivating factors” for 13 people. In the learning process, what matters to them are: the support of others, the pride of their parents. *My parents, who always believe in me, do not want to disappoint them or myself, so I try to achieve my goal* (no. 10); *their support* (no. 17); *colleagues, lecturers* (no. 18); *parents, their pride* (no. 27). In turn, 12 students admitted that they are motivated to act by time pressure, a specific deadline, and for nine people the motivator is curiosity and gaining knowledge, e.g. *I am curious about knowledge and eager to learn what interests me, because I want to broaden my horizons* (no. 4); *If I am interested in a topic, I want to have as much knowledge about it as possible*

(no. 21). The pre-service teachers are also motivated by the desire to fulfil their dreams and implement plans for the future (7 people): *goals and ambition* (no. 5); *achieving the goal* (no. 12); *going abroad* (no. 56).

According to the information obtained, the support of other people (family, lecturers, friends) is very important for the students. What is more, the achieved results and the expansion of knowledge, the achievement of the intended goals are also factors motivating them to act.

DISCUSSION

In a rapidly changing reality, adaptation to new conditions is important, and the basis is the ability to learn throughout life. In acquiring new qualifications, professional development and keeping up with changes, it is crucial to use strategies that regulate one's own learning process. As Sasin (2016) emphasizes, "working with students at the university, in addition to the curriculum, should also include shaping and strengthening their motivation and familiarizing them with learning techniques and their proper application on a daily basis" (p. 140). The authors drew attention to the organizational, supervising, social and affective strategies used by students of preschool and early school education.

The findings related to organizational strategies show that the student-teachers mostly plan their own learning and use special strategies to concentrate their attention. In addition, the source of information most often used by students is the Internet, and scientific publications found and selected. The students also use notes, publications recommended by lecturers, as well as materials from peers.

In the context of supervisory strategies, the students make a choice of learning technique, which is dictated by their learning style. They mostly use cognitive strategies – organizing and repetition, and less often strategies of elaboration. This is confirmed also by Sasin's (2016), who showed that students prefer simple ways of learning known since childhood: repetition, repeated reading, rewriting text, underlining the most important content and using colourful highlighters.

Only a small group of the students were able to identify social strategies, most of the information about the learning strategy built in the group comes from only 56 questionnaires. Only slightly more than half of the students have clear opinions about peer learning. Noting that more than half of the students do not see the benefits of learning in a group, it must be stated that this strategy is very poorly developed among the students. This is probably also due to the lack of teamwork skills, which is strongly emphasized in the pedagogical literature (Kamińska et al., 2021).

Affective strategies include coping with stress and motivation to act. The findings let us conclude that the students have difficulty managing stress during their studies. Only a few of them mentioned the methods they used, e.g. listening to mu-

sis, or various forms of relaxation. On the other hand, the students are motivated to learn by their family, lecturers, friends, as well as the desire to gain knowledge and achieve their own goals in the future.

CONCLUSION

The practical objective of the research was to formulate guidelines for enrichment academic curricula with content related to the development of self-directed learning strategies. Therefore, it is important to take up the issue of coping with stress during pedagogical studies, as well as to develop the ability to work in a group. These are extremely important skills in the context of the work of a preschool and early school education teacher, as, during their studies, students should learn ways to develop strategies that will regulate the learning process in their students.

The practical aim of the research was to formulate guidelines for enriching teaching programmes with content related to the development of independent learning strategies. According to Paris and Paris (2001), teachers have two possibilities to teach the strategies: implicitly (without explaining them directly) or explicitly (teaching strategies directly). On the basis of the research findings, it should be stated that the students have the greatest problem in the area of coping with stress. Therefore, it is important to address this issue in pedagogical studies, and introduce topics on self-regulation techniques. Another area to work on are social strategies, mainly the ability to work in a group or peer-learn. Therefore, it is worth organizing group projects during classes to develop the ability to cooperate.

It should also be noted that students use strategies that organize and supervise the learning process. The content covered in the classes and the students' previous experiences have allowed them to develop skills such as identifying appropriate educational resources or choosing a learning technique. This knowledge and skills will definitely be useful to them in their work as teachers and in the process of lifelong learning.

STUDY LIMITATIONS

The most important limitation in research referring to learning is the use of self-reported tools, as students might be not aware of their learning style. Students might not be consistent in using certain processing modes. What else, there are some interfering motivational variables and perceived situational constraints that might affect how students learn.

REFERENCES

- Boekaerts, M. (1999). Self-regulated learning: where we are today. *International Journal of Educational Research*, 31(6), 445–457. [https://doi.org/10.1016/S0883-0355\(99\)00014-2](https://doi.org/10.1016/S0883-0355(99)00014-2)
- Chansri, Ch., Kedcham, A., & Poltrak, M. (2024). The relationship between self-regulated learning strategies and English language abilities and knowledge of undergraduate students. *LEARN Journal: Language Education and Acquisition Research Network*, 17(1), 286–307.
- Ciechanowska, D. (2009). Self-directed learning. Próba konceptualizacji pojęcia na gruncie edukacji dorosłych. *Rocznik Andragogiczny*, 16, 150–160.
- Czerniawska, E. (1999). Dynamika zachowań strategicznych w uczeniu się z tekstów podręcznikowych. Wyd. UW.
- De Corte, E., Mason, L., Depaepe, F., & Verschaffel, L. (2011). Self-regulation of mathematical knowledge and skills In B.J. Zimmerman & D.H. Schunk (Eds.), *Handbook of Self-Regulation of Learning and Performance* (pp. 155–172). Routledge.
- Dembo, M. (1997). *Stosowana psychologia wychowawcza*. WSiP.
- Dębska, U., Guła-Kubiszewska, H., Starościk, W., & Jagusz, M. (2008). Z badań nad samoregulacją w uczeniu się. *Psychologia Rozwojowa*, 13(2), 57–69.
- Elliott, D. (2010). *How to teach the trophy generation*. Chronicle. http://chronicle.com/article/How-to-Teach-theTrophy/123723/?sid=pm&utm_source=pm&utm_medium=en
- European Commission. (2018). *Commission Staff Working Document Accompanying the document Proposal for a Council Recommendation on Key Competences for Life-Long Learning*. https://www.eumonitor.eu/9353000/1/j4nvgs5kkg27kof_j9vvik-7m1c3gyxp/vkl58h3b5hm0/f=/5464_18_add_2.pdf
- Kamińska, M., Szczęsna, I., Wielgus, A., & Żak, R. (2021). *Praca zespołowa jako kompetencja XXI wieku*. Novum.
- Keren, D., Lockyer, J., Kelly, M., Chick, N., & Ellaway, R.H. (2020). In our own time: Medical students' informal social studying and learning. *Teaching and Learning in Medicine*, 32(4), 353–361. <https://doi.org/10.1080/10401334.2020.1733579>
- Ledzińska, M. (2000). Uczenie się wykraczające poza warunkowanie. In J. Strelau (Ed.), *Psychologia* (pp. 117–136). GWP.
- Loyens, S.M.M., Magda, J., & Rikers, R.M.J.P. (2008). Self-directed learning in problem-based learning and its relationships with self-regulated learning. *Educational Psychology Review*, 20(4), 411–427.
- Minnaert, A., & Janssen, P.J. (1999). The additive effect of regulatory activities on top of intelligence in relation to academic performance in higher education. *Learning and Instruction*, 9, 77–91. [https://doi.org/10.1016/S0959-4752\(98\)00019-X](https://doi.org/10.1016/S0959-4752(98)00019-X)
- Nilson, L.B. (2013). *Creating Self-Regulated Learners: Strategies to Strengthen Students' Self-Awareness and Learning Skills*. Stylus Publishing.
- Oxford, R.L. (1990). *Language Learning Strategies: What Every Teacher Should Know*. Heinle & Heinle.



- Oxford, R.L. (2017). *Teaching and Researching Language Learning Strategies. Self-Regulation in Context*. Routledge.
- Paris, S.G., & Paris, A.H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, 36(2), 89–101.
- Ruohoniemi, M., & Lindblom-Ylänne, S. (2009). Students' experiences concerning course workload and factors enhancing and impeding their learning – a useful resource for quality enhancement in teaching and curriculum planning. *International Journal for Academic Development*, 14(1), 69–81.
- Sasin, M. (2016). Umiejętności uczenia się studentów pedagogiki. *Pedagogika Szkoły Wyższej*, 1, 125–142.
- Schunk, D.H., & Zimmerman, B.J. (Eds.). (1994). *Self-Regulation of Learning and Performance. Issues and Educational Applications*. Erlbaum.
- Singleton-Jackson, J.A., Jackson, D.L., & Reinhardt, J. (2010). Students as consumers of knowledge: Are they buying what we're selling? *Innovative Higher Education*, 35(4), 343–358.
- Stadtfeld, C., Vörös, A., Elmer, T., & Raabe, I.J. (2019). Integration in emerging social networks explains academic failure and success. In *Proceedings of the National Academy of Sciences of the United States of America*, 116(3), 792–797. <https://doi.org/10.1073/pnas.1811388115>
- Watkins, K.E., & Marsick, V.J. (2021). Informal and incidental learning in the time of COVID-19. *Advances in Developing Human Resources*, 23(1), 88–96. <https://doi.org/10.1177/1523422320973656>
- Winne, P.H., & Perry, N.E. (2000). Measuring self-regulated learning tags. In M. Boekaerts, P.R. Pintrich & M. Zeidner (Eds.), *Handbook of Self-Regulation* (pp. 531–566). Academic Press. <http://dx.doi.org/10.1016/b978-012109890-2/50045-7>
- Zimmerman, B.J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329–339. <https://doi.org/10.1037/0022-0663.81.3.329>
- Zimmerman, B.J. (2013). From cognitive modelling to self-regulation: A social cognitive career path. *Educational Psychologist*, 48(3), 135–147. <https://doi.org/10.1080/00461520.2013.794676>
- Zimmerman, B.J. (2015). *Self-Regulated Learning: Theories, Measures, and Outcomes*. Academic Press.

STRATEGIE SAMOREGULOWANEGO UCZENIA SIĘ STUDENTÓW PEDAGOGIKI PRZEDSZKOLNEJ I WCZESNOSZKOLNEJ

Wprowadzenie: Podstawą rozwoju zawodowego jest umiejętność zarządzania własnym procesem uczenia się. Dlatego tak ważne jest, aby przyszli nauczyciele rozwijali tę umiejętność w trakcie studiów, aby mogli osiągać sukcesy zawodowe i przekazywać wiedzę w tym zakresie swoim uczniom.

Cel badań: Celem badań jest określenie, jakie strategie regulujące proces uczenia się są stosowane przez nauczycieli początkujących w celu poprawy ich osiągnięć w nauce.

Metoda badań: Badania mają charakter jakościowy. Kwestionariusz został stworzony na podstawie oksfordzkiej typologii strategii uczenia się, koncepcji samodzielnego uczenia się Paris i Paris, Ledzińskiej oraz opisu samoregulujących strategii uczenia się Zimmermana.

Wyniki: Analiza uzyskanych wyników pozwala na określenie występowania czterech typów samoregulujących się strategii uczenia się wśród nauczycieli wychowania przedszkolnego i edukacji wczesnoszkolnej. Studenci posługują się głównie strategiami organizacyjnymi i nadzorującymi. Mają oni najmniejsze doświadczenie w stosowaniu strategii społecznych do wspólnego uczenia się i strategii afektywnych do radzenia sobie ze stresem.

Wnioski: Istnieje ogromna potrzeba edukowania studentów, jak używać i rozwijać strategie samoregulacji, które można przekazać uczniom. Szczególnie ważne jest zwrócenie większej uwagi na strategie społeczne i afektywne podczas studiów pedagogicznych, ponieważ są one słabo rozwinięte, ale kluczowe dla radzenia sobie ze stresem i rozwijania umiejętności pracy w grupie podczas studiów pedagogicznych.

Słowa kluczowe: samoregulowane uczenie się, strategie uczenia się, edukacja przedszkolna i wczesnoszkolna, nauczyciel początkujący