

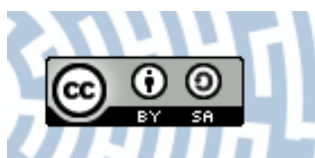


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## **Learning Strategies Applied by University Students in Distance Learning**

### **Abstract**

This review study aims to provide an overview of previous research on learning strategies used by students studying in a distance-learning form. The basic sources for research were the Web of Science, Research, Gate and Google Scholar databases. We also proceeded with a subsequent search based on frequent citations, using the Internet search engine Google.

In accordance with the aim of this study, we sought answers to the following research questions in the analysis:

1. Which learning strategies are most frequently used by students studying in a distance-learning form?
2. In connection with which factors influencing distance-learning outcomes are learning strategies examined?
3. Which research methods are used to study distance-learning strategies?

We came to the following conclusions: In distance learning, it is necessary to help students develop their autonomous learning competence, knowledge of diverse learning strategies and reflective use of learning strategies, and increase the repertoire of reading strategies used by students. For some distance-learning students, however, the use of diverse learning strategies poses an issue; adult distance-learning students use only a fairly limited repertoire of learning strategies. Adult students use only those learning strategies which have worked for them in the past and are therefore convinced of their effectiveness. The most frequently

used learning strategies for distance-learning students are retelling the text in their own words, with which students check whether they have understood the text sufficiently, compilation of an overview of information based on the read text, and the use of mnemonics.

In connection with the factors influencing distance-learning outcomes, research has shown that there is a relationship between the degree of cognitive development and the use of a broader repertoire of learning strategies. It was found that the effectiveness of learning in self-directed learning and the use of a wider repertoire of learning strategies are closely related to students' mood, self-confidence, self-assurance, and perseverance. In this study of learning strategies, quantitative and qualitative research methods are applied. However, mixed method research design is the most commonly used approach.

**Key words:** learning strategies, distance learning, tools supporting collaboration, metacognitive strategies, student's motivation

We date the beginnings of scientific research into learning strategies back to the 1960s, when, along with the development of cognitive psychology, researchers' attention focused more on the student and the learning processes, whereas previously, research was primarily teacher-oriented. The first research study on learning strategies was Carton's *The Method of Inference in Foreign Language Study* (Carton, 1966). First research studies (Stern, 1975; Naiman, Frohlich, Stern, & Todesco, 1978; Rubin & Wenden, 1987) focused on discovering which learning strategies were used by successful students. The results of these first research studies found that the success of students in school was more significantly influenced by the learning strategies they used rather than their intelligence. These results are in agreement with the results of later research (e.g., Czerniawska, 1993, 1998), which showed that successful students use more diverse learning strategies than unsuccessful students (e.g., Zimmerman & Pons, 1986; Vlčková, 2005), and that successful students use different learning strategies from those used by unsuccessful students (e.g., O'Malley, Chamot, & Küpper, 1989; Mangubhai, 1991; Wen & Johnson, 1997; Lind & Sandmann, 2003; Vlčková, 2005). Recently, however, research has emerged that refutes this thesis and demonstrates that there is little or no relationship between the learning strategies used and learning outcomes (Artelt, 2000; Baumert, 1993; Baumert & Köller, 1996; Baumert, Heyn, & Köller, 1992; Pintrich & de Groot, 1990; Pokay & Blumenfeld, 1990; Schiefele, Streblow, Ermgassen, & Moschner, 2003; Sinkavich, 1994; Souvignier & Gold, 2004).

## Research Method

This review study aims to provide an overview of previous research on the topic of learning strategies used by students studying in a distance-learning form. Since it is a presentation of the issue, an overview study method was selected, the so-called literary review, i.e., according to Mareš (2013, p. 430), “an overview of existing knowledge about the selected topic in a certain period of time [which] is based on discovered research studies on the topic, on the analysis and generalization of their results”. The basic sources for the research were the Web of Science, Research Gate, and Google Scholar databases. We also proceeded with a subsequent search based on frequent citations, using the Internet search engine Google.

In accordance with the aim of this study, in the analysis, we sought answers to the following research questions:

1. Which learning strategies are most frequently used by students studying in a distance-learning form?
2. In connection with which factors influencing distance-learning outcomes are learning strategies examined?
3. Which research methods are used to study distance-learning strategies?

## Terminology

The term *learning strategy* was first used in 1956 by Bruner, Goodnow, and Austin (1956) in the psychology of thinking; they defined learning strategies as a sequence of decision-making in the receiving, storing, and utilising of information, which leads to predetermined goals. Even today, this concept is the basis of most definitions, as learning strategies are usually conceived as a set of procedures, methods, techniques, and activities that students consciously or unconsciously use in the learning process and that lead to learning effectiveness; learning strategies are used to remember more information faster, recall memorized information, and apply it (Vlčková, 2007, pp. 82–91). We encounter this concept, for example, in the definition of learning strategies by Vlčková and Lojová (2011), who understand learning strategies as conscious or potentially conscious and intentional procedures that the individual uses during the learning process to facilitate the acquisition, processing, memorization, recall, and application of information (Lojová & Vlčková, 2011). Janíková et al. (2011) define learning strategies as complex problem-solving

operations in which the process of creating hypotheses and verifying them is of particular importance.

Contrary to this notion, Czerniawska and Ledzińska (1994) define learning strategies as the conscious use of a particular procedure, specific activities and techniques in order to memorize and recall instilled information in a particular situation. According to Czerniawska and Ledzińska, the conscious use of a certain learning strategy increases the efficiency of the learning process, leads to faster memorization of a larger amount of information, which the student is then able to systematically classify, and it generally helps with in-depth learning. Czerniawska (1999) sees learning strategies as any way of organizing learning activities in order to acquire new information. Riding and Cheema (1991) perceive them as a tool or technique for managing a learning situation. While Weinstein (1989) understands learning strategies as ways of behaving and thinking that enable learning, Weinstein and Mayer (2016) and Richards and Platt (1992, p. 209) have a similar understanding of learning strategies. Weinstein (1989), Hnilica (1992), Somuncuoglu and Yildirim (1999) understand learning strategies as a repertoire of activities that start from simple study skills to complex thought processes. The connection between learning strategies and metacognitive processes is also emphasized by Ledzińska (2000), Arends (2012), and Janík (2013), who emphasize the connection between metacognitive processes and learning effectiveness.

A learning strategy that is appropriately chosen with regard to the goal of education leads to greater learning efficiency, positively affects the student's ability to discover, acquire, systematize, and master new information (Weinstein & Mayer, 2016). Seel (2011) also emphasizes the connection between learning style and learning strategies, understanding learning strategies as a set of learning techniques (Seel, 2011) based on the individual's learning styles.

## **Results of the Study**

### **Which Learning Strategies are Most Frequently Used by Students Studying in a Distance-Learning Form?**

Research by Dutch researchers Neroni, Meijs, Gijsselaers, Kirschner, and Groot (2019), which included 758 distance education students, pointed out the connection between learning effectiveness and the choice of an appropriate learning strategy, and notes that motivation, the ability to plan and reflect on one's own learning strategies, and the use of diverse learning strategies, including metacognitive

strategies, helps with study success. For some distance-learning students, however, the use of diverse learning strategies poses an issue; as was found in the research study by Morgan, Dingsdag, and Saenger (1998), adult distance-learning students only use a fairly limited repertoire of learning strategies. Peacock (2001) also states that adult students use only those learning strategies which have worked for them in the past and are therefore convinced of their effectiveness.

According to Najvarová (2005), the most frequently used learning strategy for distance-learning students is retelling the text in their own words, with which students check whether they have understood the text sufficiently (this strategy was used by 54.3% of respondents). 15.7% of students compile an overview of information based on the read text and 17.1% of students use mnemonics. According to an Australian longitudinal research study (Lyll, 2005), the following learning strategies are crucial for distance-learning students. Before beginning the acquisition of learning materials from textual study materials, students use a preliminary reading in which they “scan the text”, which is followed by an in-depth reading, in which students read the text carefully in order to memorize as much information as possible. In the in-depth reading phase, students approach the text interactively and critically, graphically highlight key information in the text, write notes in the text that help them navigate through it, categorize information, and create their own notes. Students also consider retelling the read text in their own words to be an effective learning strategy. Research by Žlábková and Krninský (2014) carried out at the Faculty of Education of the University of South Bohemia found that students prepare for exams most frequently by developing answers to questions and memorizing and repeating them. Most students prepare answers because they need to create their own system that helps them navigate through information and makes it easier to memorize key information and repeat curriculum. A smaller percentage of students prepare for their exams only by reading the recommended sources, understanding the read material and memorizing key information (Žlábková & Krninský, 2014, p. 22).

Rehearsal strategies are very popular among adult students (Filcher & Miller, 2000). Specific rehearsal tactics include “repeating the material aloud, copying the material, taking selective verbatim notes and underlining the most important parts of the material” (Weinstein & Mayer, 2016, pp. 315–327). In a study conducted on adult learners in distance education, Bemt and Bugbee (1990) examined specific tactics, such as underlining/highlighting, memorizing the material, and mentally rehearsing important ideas. In a study conducted on adult learners in distance education, McKeachie et al. (1986) and Weinstein and Mayer (1986) examined specific tactics, such as paraphrasing, summarizing, creating analogies, generative note-taking, and answering questions.

## **In Connection with which Factors Influencing Distance-Learning Outcomes are Learning Strategies Examined?**

Although research has shown that there is a relationship between the degree of cognitive development and the use of a broader repertoire of learning strategies (Neuner-Anfindsen 2005), many adult students are unable to study fully independently, as they lack self-management and autonomous learning competencies, and are dependent on the teacher (Pryck et al., 2005, p. 44).

A research study conducted at the Faculty of Agriculture at the Iowa State University (Filcher & Miller, 2000, pp. 60–68) found that the effectiveness of learning in self-directed learning and the use of a wider repertoire of learning strategies is closely related to student's mood, self-confidence, self-assurance, and perseverance; it is also related to volitional and character traits, such as ambition, diligence, and self-motivation. Similar results were obtained by McKeachie et al. (1986) and Pavelková (2002). According to McCombs (1988) and Moore (1989), higher learning efficiency for distance-learning students is mainly related to motivation, both internal and external. Similar results were obtained by Sinkavich (1994), Oxford, Park-Oho, Ita, and Sumrall (1993). According to Vlčková (2003) and Vandergriff (2005), motivated students use a wider repertoire of learning and metacognitive strategies. According to Miller and Carr (1997), the e-learning environment itself is motivating and supportive for students in developing learning and metacognitive strategies, as Miller and Carr found that students in the e-learning environment show more interest in using effective learning strategies; they think more about their own learning process, they plan their study activities, and monitor and evaluate the results of their learning.

Zlámalová (2008) perceives the lack of motivation of students to study as the biggest problem on the part of students, which leads to a loss of interest in the progress of education and poor study results. It was found that insufficiently motivated students feel lonely when studying, so it is important to enable and develop communication and collaboration in the online environment. Insufficient motivation of students can also be caused by bad study habits. According to Miller and Carr (1997), the level of students' motivation is influenced by their cooperation with classmates within the online environment. They found that contact with other classmates and tutors was very important for students. Their research found that nearly all students studying in distance education maintain contact with their classmates, with whom they motivate, support and help each other; only 18.9% studied only on the basis of tutorials. Rashid and Rana (2019, pp. 57–66) also confirmed this finding in their research and further discovered that cooperation and mutual learning is an important factor that positively influences learning outcomes and motivation to learn. A similar conclusion was reached by a team of researchers that included Tran, Nguyen, Van De, Soryaly, and Doan (2019, pp. 79–88). Coopera-



tion and mutual learning also significantly influence students' motivation to learn (Mahmood & Igbal, 2018); students motivate each other to study, which reduces the risk of procrastination (Zormanová, 2017). Students in distance learning were found to have a subjective feeling of a higher rate of procrastination related to the lack of strong will to self-study and inability to organize their time effectively (Zormanová, 2017). The learning group plays an important role in distance education (Roszak & Kołodziejczak, 2017; Alonso-Díaz, Gutierrez-Esteban, Delicado-Puerto, Yuste-Tosina, Delgado, & Arias-Masa, 2017). Learning in groups is a way to overcome the isolation of a distance student (Ryazantseva, 2016; Liu, Xue & Li, 2020; Karim et al., 2018).

Tools that support collaboration include video and audio conferences, online meetings, forums, instant messaging, chats, blogs, wiki-resources, electronic mailing lists, "white boards", social networks, shared documents (Morze, Vember & Varchenko-Trotsenko, 2017), online collaborative projects (Moskwa-Tarnowska, 2017), telecollaboration projects (Marczak, Krajka, 2016), broadcasting networks (Shelomowska, Sorokina, Romaniukha, & Bohomaz, 2017), and gamification (Morańska, 2016; Azoui, Ayachi Ghannouchi, & Brahmi, 2020). It can be claimed that the more communication options available for the teacher within the course, the easier and more efficient it is for the teacher to organize the learning process (Noskova, Pavlova, & Yakovleva, 2017). Other important tools include tests, quizzes, and simulations which offer students a chance to test their knowledge without taking any risks. Online communication not only helps to increase student motivation, but also mediates the exchange of information within the virtual environment (Šnýdrová, Ježková, & Petrů, 2020).

Frequent communication and cooperation with the tutor are also very important. Miller (1997) found that students who frequently seek the effective help of the tutor were more likely to receive an "A" on the exam. According to Barešová (2011), collaboration in the form of student's interaction with the tutor enables the monitoring of a student's progress, increases the student's motivation to study, and also reduces the risk of procrastination. According to Pryck et al. (2005), intensive communication and cooperation between the student and the tutor is highly important. It was found that distance students regularly feel uncertain about whether they are going in the right direction and whether they have understood the subject well because they lack immediate feedback from the teacher. Distance students also feel social isolation (Zormanová, 2017). This problem can be partially eliminated by creating various self-evaluation tests (Voronova, Hotler, & Romanukha, 2017) and through intensive communication between the tutor and students through various communication channels (Černý, Chytková, Mazačová, & Šimková, 2015).



Pryck et al. (2005) state that distance learning can also be implemented for non-independent students who possess insufficiently developed autonomous learning competencies. Their shortcomings can be eliminated by controlled constructive interaction between the tutor and students and the use of structured study materials with predefined goals and set learning tasks that evoke an indirect virtual dialogue in which the student communicates with the text (Kapoun, 2016). The text is complemented by questions leading to the student's self-reflection and other self-assessment activities which allow the student to control the effectiveness of their own learning. The content of the course consists of, for example, reading materials, assignments, case studies, simulations with instructions for students, or tests. Course activities should develop students' critical thinking and a repertoire of learning strategies, and require the application and analysis of memorized information (Pryck et al., 2005). Other tools used in the virtual environment also contribute to the effectiveness of distance learning and to the remarkable success of students in their studies. For example, in a research study by Miller (1997), it was established that successful students were more likely to use self-testing, utilising tests and quizzes during an e-learning course. Noskova et al. (2017) created a classification of digital educational resources. They are divided into these groups: news, instructional, evaluative, instrumental, experiences, conversational, and collaboration.

Table 1  
*Pedagogical ICT tools*

Classification of digital educational resources	Pedagogical ICT tools
News	Reference books and documents
Instructional	Exercise activities Interactive tutorials E-learning courses Self-assessment questionnaires
Evaluative	Training tests Summative assessment Opinions surveys Search engine virtual atlas
Instrumental	Calculators Translators WebQuest modalities
Experiences	Scientific simulations Virtual Worlds Mailing lists

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Conversational	Forums Chats Instant messages Comments Blogs Audio and videoconferences Telamatics projects
Collaboration	Wiki environments and management within a network oriented to the applications of knowledge

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Source: Own work

### Which Research Methods are Used to Study Distance-Learning Strategies?

Quantitative and qualitative research methods are applied in the study of learning strategies. However, it can be said that the qualitative approach was more prominently used at the beginning of the study of this topic. Currently, a mixed design is the most commonly used approach.

Quantitatively oriented research studies focus on the influence of individual characteristics on the learning strategies used, the influence of culture on the learning strategies used. Furthermore, they deal with the relationship between learning strategies and learning outcomes, the transfer of strategies to new situations and tasks, and the models of strategy training; they also create classifications of learning strategies and terminology. Descriptive and descriptive-relational research predominate among quantitatively oriented research surveys. Both basic and applied research is widespread among quantitatively oriented research surveys (Vlčková, 2010). Basic research, which is less frequent, deals mainly with the identification of learning strategies, with defining learning strategies, creating classifications of learning strategies, exploring the characteristics of learning strategies, and researching the influence of variables on the use of learning strategies (main variables examined are age, gender, and motivation). The influence of specific variables on the use of learning strategies is addressed by, for example, Chamot and El Dinary (1999), Green and Oxford (1995), Oxford (1990), Burry-Stock (1995), and Vlčková (2005).

Applied research, quantitatively oriented, is focused on the issues of teaching and training learning strategies. Its aim is to map the possibilities of supporting effective learning for learners (Vlčková, 2010). Among the best-known research studies of applied research dealing with the topic of learning strategies is research on successful students (e.g., Rubin, 1975; Stern, 1975).

As regards quantitative methods, the method of a questionnaire survey is applied most, while the questionnaires used are based on already created classifications of learning strategies. The aim of research conducted with the re-

search method of a questionnaire survey is to supplement the already created and used classifications of learning strategies with new findings (e.g., Oxford, 1990; O'Malley et al., 1985; Weinstein & Mayer, 2016, etc.).

Qualitatively oriented research surveys focus on teaching learning strategies, expanding the repertoire of learning strategies used by students, the development of learning strategies, and the development and changes in their use in relation to the age of students. Action research predominates among qualitatively oriented research surveys (Vlčková, 2010). In terms of qualitative methods, the following research methods are most frequently used: ethnographic observation and individual unstructured interviews, which serve mainly to create theoretical concepts (e.g., research study by Wong-Fillmore (1976, 1979) and Rubin (1981)).

Table 2

*Topics of research studies focusing on learning strategies*

Topic of research	Author/s
Identification, description, and classification of strategies, terminology of the field	Wong-Fillmore, 1976, 1979; Rubin, 1981; Naiman et al., 1978
Development of learning strategies	Chipman & Segal, 1985; Brown et al., 1983; Adams, 1989
Creating a standardized research technique	Oxford, 1990; Weinstein, Palmer, & Schulte, 2002;
Effectiveness of learning strategies	Cohen & Aphek, 1981; Bialystok, 1981; Politzer & McGroarty, 1985; Zimmerman & Pons, 1986; Huang & Narsen, 1987; Artelt, 1999; Bremer, 1999; Lind & Sandman, 2003; Vlčková, 2004, 2007; Escribe & Huet 2005
Learning strategies in the context of student characteristics	Reiss, 1981; Politzer & McGoarty, 1985; Oxford & Ehrman, 1987; Skehan, 1990; Stern, 1992; Lind & Sandmann, 2003; Vandergriff, 2005; Vlčková, 2003, 2007
Learning strategies in the context of environmental characteristics	Wong-Fillmore, 1976, 1979; Naiman et al., 1978; Rubin, 1981; Davies & Kaplan, 1998; Vlčková, 2003, 2007
Learning strategies in the context of teaching characteristics, Models of teaching learning strategies	Oxford, 1990, 1994; O'Malley, 1990; Brown, Campione, & Day, 1981; Brown et al., 1983; Dansereau, 1985; Brown & Palincsar, 1984; Friedrich, 1992
Transfer of strategies to new situations and tasks	Palincsar & Brown, 1984; Borkowski, Weyhing, & Carr, 1988
Learning strategies in the context of language skills	Oxford, 1990; Najjarová, 2008

Learning strategies in the context of a language task	Weaver & Cohen, 1997; Chamot & El-Dinary, 1999; Fan, 2003; Vandergrift, Goh, Mareshcal, & Hassantaghdotari, 2005
Teaching learning strategies	Brown & Palincsar, 1989; Mandl & Friedrich, 1992

Source: Own work

Table 3  
*Researcher describing/analysing learning strategies*

Method used	Researchers using the method
Observation	Rubin, 1975
Interview	Chamot, 1999, 1996
Retrospective interview	Rubin, 1975; Naiman et al., 1978; O'Malley & Chamot, 1990
Stimulated recall interview	Robbins, 1996
Thinking-out-loud interview	Flavell, 1992; Bialystock, 2001; Chamot & Keatley, 2003; Cohen et al., 1998, O'Malley, Chamot, & Küpper, 1989
Questionnaires, inventories	Chamot & El-Dinary, 1999; Fan, 2003; Najvarová 2006; Vandergrift, Goh, Mareshcal, & Hassantaghdotari, 2005; Weaver & Cohen, 1997
Questionnaires of learning strategies (general)	FLA questionnaire (Hug, 1976); AVI (Thiel et al., 1979); STEB (Fritsch & Küffner, 1980); IGT (Schumann-Hengsteler et al., 1993); SRST-K (Kuhl & Christ, 1993); LPS (Neber, 1994); LIST (Wild & Schiefele, 1994); LSF (Lingl, 1997) and LASSI (Weinstein, Palmer, & Schulte, 2002)
Questionnaires of learning strategies for foreign language learning	SILL questionnaire (Oxford, 1990) used by Cohen, Weaver, & Li, 1998; Nyikos & Oxford, 1993; Olivares-Cuhat, 2002; Oxford, 1990, 1996; Oxford & Burry-Stock, 1995; Wharton, 2000; Vičková, 2003, 2005; Bedell & Oxford, 1996; Bruen, 2001; Green & Oxford, 1995; Nyikos & Oxford, 1993; Oxford & Burry-Stock, 1995; Wharton, 2000; Miller, 2000; Vičková, 2003, 2006
Questionnaires focused on strategies on specific language skills	MARSI questionnaire (Mokhari, 2000); MALO (Vandergrift, Goh, Mareshcal, & Hassantafaghdotari, 2005); ITEF and CTEF (Finkbeiner, 2005)
Diary	Rubin, 1975; Nunan, 1995; Paige, Cohen, & Shively, 2004
Experiments	Cohen, 1996; Nunan, 1997
Tests	Cohen & Apehek, 1981

Source: Own work

## Conclusions

In accordance with the aim of this study, we have answered to the following research questions in the analysis:

*1. Which learning strategies are most frequently used in the studies by students studying in a distance-learning form?*

We came to the following conclusions: The most frequently used learning strategies for distance-learning students are paraphrasing, summarizing, underlining/highlighting key information in the text, categorizing information to remember the text better, writing notes, creating analogies, as well as generative note-taking, question answering, retelling of the text in their own words, and preparation of answers to memorize key information better.

*2. In connection with which factors influencing distance-learning outcomes are the learning strategies examined?*

It was found that there is a relationship between the degree of cognitive development and self-directed learning, the use of a broader repertoire of learning strategies and self-confidence, self-assurance, perseverance, ambition, diligence, and motivation, both internal and external. It was established that students in the e-learning environment pay more attention to using effective learning strategies; they concentrate on their own learning process: they plan their study activities, monitor and evaluate the results of their learning.

*3. Which research methods are used to research distance-learning strategies?*

Both quantitative and qualitative research methods are used in the research study of learning strategies. Nevertheless, mixed design was used the most widely.

Quantitatively oriented research studies deal with relationship between learning strategies and learning outcomes, models of strategy training, the identification of learning strategies, defining learning strategies, creation of classifications of learning strategies, exploration of the characteristics of learning strategies, and researching the influence of variables on the use of learning strategies (main variables examined are age, gender, and motivation). Quantitative-oriented research studies focus in particular on the method of questionnaire survey. The questionnaires used are based on the already created classifications of learning strategies. Qualitatively oriented research surveys mainly deal with the development of learning strategies. Qualitatively oriented research studies, on the other hand, focus in particular on the method of ethnographic observation and individual unstructured interviews are applied the most often.

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Lucie Zormanová

## Strategie uczenia się stosowane przez studentów studiujących na odległość

### Streszczenie

Niniejsze badanie przeglądowe ma na celu przedstawienie wcześniejszych badań na temat strategii uczenia się stosowanych przez studentów studiujących na odległość. Podstawowym źródłem badań były bazy danych Web of Science, Research Gate i Google Scholar. Przystąpiliśmy również do kolejnego wyszukiwania w oparciu o częste cytowania z wykorzystaniem wyszukiwarki internetowej Google.

Zgodnie z celem niniejszego badania, w analizie poszukiwaliśmy odpowiedzi na następujące pytania badawcze:

1. Jakie strategie uczenia się najczęściej stosują na studiach studenci studiujący na odległość?
2. W związku z którymi czynnikami wpływającymi na efekty uczenia się na odległość są najczęściej badane strategie uczenia się?
3. Jakie metody badawcze są wykorzystywane do badania strategii uczenia się na odległość?

Doszliliśmy do następujących wniosków: W przypadku nauczania na odległość jest ważna pomoc studentom w rozwijaniu ich kompetencji w zakresie samodzielnego uczenia się, znajomość różnorodnych strategii uczenia się i refleksyjnego wykorzystania strategii uczenia się, a także

rozwijanie repertuaru strategii czytania stosowanych przez studentów. Jednak dla niektórych studentów uczących się na odległość stosowanie różnych strategii uczenia się może stanowić pewien problem, ponieważ korzystają jedynie z dość ograniczonego repertuaru strategii uczenia się. Dośrośli studenci używają tylko tych strategii uczenia się, które sprawdziły się w przeszłości i dlatego są przekonani o ich skuteczności. Najczęściej stosowaną strategią uczenia się w przypadku uczenia się na odległość jest powtarzanie tekstu własnymi słowami. Dzięki niemu studenci sprawdzają, czy dobrze zrozumieli tekst, tworzą zestawienie przeglądu informacji na podstawie przeczytanego tekstu i wykorzystują mnemotechniki.

Badania wykazały, że istnieje związek między stopniem rozwoju poznawczego a stosowaniem szerszego repertuaru strategii uczenia się. Stwierdzono, że skuteczność uczenia się i stosowanie szerszego repertuaru strategii uczenia się jest ściśle związana z nastrojem ucznia, pewnością siebie i wytrwałością.

W badaniach strategii uczenia się są stosowane ilościowe i jakościowe metody badawcze, jednak najczęściej stosowane są metody mieszane.

**S ł o w a k l u c z o w e:** strategie uczenia się, kształcenie na odległość, narzędzia wspierające współpracę, strategie metapoznawcze, motywacja

Люси Зорманова

## **Стратегии обучения, используемые студентами обучающимися дистанционно**

### **А н н о т а ц и я**

Это обзорное исследование направлено на представление обзора предыдущих исследований стратегий обучения, используемых студентами обучающимися дистанционно. Основным источником исследований были базы данных Web of Science, Researchgate и Google Scholar. Мы также использовали другой инструмент поиска, основанный на частых цитированиях с использованием поисковой системы Google.

В соответствии с целью данного исследования, в ходе анализа мы искали ответы на следующие вопросы исследования:

1. Каковы наиболее распространенные стратегии обучения, используемые студентами во время учебы дистанционно?
2. В отношении каких факторов, влияющих на результаты дистанционного обучения, наиболее изученные стратегии обучения?
3. Какие методы исследования используются для изучения стратегий дистанционного обучения?

Мы пришли к следующим выводам: для дистанционного обучения важно помочь студентам развить их независимые учебные компетенции, ознакомиться с различными стратегиями обучения и рефлексивным использованием стратегий обучения, а также разработать систему стратегий чтения используемых студентами. Однако для некоторых студентов дистанционного обучения может быть проблемой использование различных стратегий обучения, и эти студенты используют только довольно ограниченный набор стратегий обучения. Взрослые студенты используют только те стратегии обучения, которые работали в прошлом, и поэтому уверены в их эффективности. Наиболее распространенные страте-

гии обучения в случае дистанционного обучения - это повторение текста своими словами, студенты проверяют, правильно ли они поняли текст, составление обзора информации на основе прочитанного текста и использование мнемоники.

Исследования показали, что существует взаимосвязь между степенью когнитивного развития и использованием более широкого набора стратегий обучения. Было обнаружено, что эффективность обучения и использование более широкого набора стратегий обучения тесно связаны с настроением, уверенностью и настойчивостью учащегося;

При изучении стратегий обучения используются количественные и качественные методы исследования. Однако чаще всего используются смешанные методы исследования.

**К л ю ч е в ы е с л о в а:** стратегии обучения, дистанционное обучение, инструменты поддержки сотрудничества, метакогнитивные стратегии, мотивация.

Lucie Zormanová

## **Estrategias de aprendizaje utilizadas por estudiantes a distancia**

### **R e s u m e n**

Este estudio de revisión tiene como objetivo proporcionar una descripción general de la investigación previa sobre las estrategias de aprendizaje utilizadas por los estudiantes a distancia. La principal fuente de investigación fueron las bases de datos Web of Science, Research Gate y Google Scholar. También procedimos a otra búsqueda basada en citas frecuentes utilizando el motor de búsqueda de Google.

En línea con el objetivo de este estudio, en el análisis se buscaron respuestas a las siguientes preguntas de investigación:

1. ¿Cuáles son las estrategias de aprendizaje más comunes utilizadas por los estudiantes a distancia durante sus estudios?
2. ¿En relación con qué factores que influyen en los resultados del aprendizaje a distancia son las estrategias de aprendizaje más estudiadas?
3. ¿Qué métodos de investigación se utilizan para estudiar las estrategias de aprendizaje a distancia?

Llegamos a las siguientes conclusiones: Para el aprendizaje a distancia, es importante ayudar a los estudiantes a desarrollar sus competencias de aprendizaje independiente, familiarizarse con una variedad de estrategias de aprendizaje y el uso reflexivo de las estrategias de aprendizaje, y desarrollar un repertorio de estrategias de lectura para los estudiantes. Sin embargo, para algunos estudiantes de educación a distancia puede ser un problema utilizar diferentes estrategias de aprendizaje y estos estudiantes de educación a distancia solo usan un repertorio bastante limitado de estrategias de aprendizaje. Los estudiantes adultos solo utilizan estrategias de aprendizaje que han funcionado en el pasado y, por lo tanto, confían en su eficacia. Las estrategias de aprendizaje más habituales en el caso del aprendizaje a distancia son la repetición de un texto con sus propias palabras, el alumno comprueba si ha entendido correctamente el texto, la recopilación de una revisión de información basada en el texto leído y el uso de mnemotécnicos.

La investigación ha demostrado que existe una relación entre el grado de desarrollo cognitivo y el uso de un repertorio más amplio de estrategias de aprendizaje. Se ha descubierto que la

eficacia del aprendizaje y el uso de un repertorio más amplio de estrategias de aprendizaje están estrechamente relacionados con el estado de ánimo, la confianza y la perseverancia del alumno;

Los métodos de investigación cuantitativos y cualitativos se utilizan en el estudio de las estrategias de aprendizaje. Sin embargo, los métodos de investigación mixtos se utilizan con mayor frecuencia.

**P a l a b r a s c l a v e:** estrategias de aprendizaje, aprendizaje a distancia, herramientas de apoyo a la cooperación, estrategias metacognitivas, motivación.