UNIVERSITETI I EVROPËS JUGLINDORE
УНИВЕРЗИТЕТ НА ЈУГОИСТОЧНА ЕВРОПА
SOUTH EAST EUROPEAN UNIVERSITY

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LANGUAGES, CULTURES, AND COMMUNICATION: THE FUTURE OF THE HUMANITIES AND SOCIAL SCIENCES

April, 2025

BOOK OF PROCEEDINGS

INTERNATIONAL SCIENTIFIC CONFERENCE

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31 May 2024, Tetovo, Republic of North Macedonia

Tetovo, 2025

159.922:[37.018.43:004.773.5

PSYCHOLOGICAL ASPECTS OF DISTANCE LEARNING

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Abstract:

Psychology is an important aspect of every task we engage in. The answer to many questions lies in this science. Our actions in certain situations are predetermined if we take a closer look at the rules of the brain, and our mental activities. The way we act and react is not accidental. When it comes to language learning, there are numerous activities that enable the retention of vocabulary, phrases, and constructions. These activities are to some extent similar, but in some ways modified when it comes to language acquisition in distance learning. In teaching methodology, we are familiar with the term metacognition. It is the ability of the students to control and regulate their own learning. Metacognition is defined as "cognition of cognition" or "thinking about thinking". In this paper we shall see its function in distance learning. Another key issue is the psychological and communicational space that exists between the student and the teacher in distance learning, called transactional distance. The third term is learning analytics (LA), a tool for measuring, collecting, analyzing and reporting of data in relation to the learners, for the purpose of better understanding the process of learning and more successful improvement. Every time learners engage in the learning process, data trails are created, which can later be analyzed. LA is a metacognitive tool in an online environment that teachers can use to raise students' awareness of their own learning results and behaviors. By analyzing those trails and making students aware of their own learning, the transactional distance decreases and the learning outcomes increase. Hence, the focus of this paper is to discuss the role and the relation of these three terms in distance education.

Key words: metacognition, transactional distance, learning analytics, tool, self-regulation

Introduction

A crucial component of every work we undertake is psychology. This science holds the answers to a great deal of questions, offering insights into human behavior, thought processes, and interactions. When we examine the rules governing our mental processes and explore the intricacies of the brain more closely, we begin to see that our actions in particular situations are often predetermined by a combination of internal and external factors. Our behaviors and responses are not random; they are shaped by cognitive, emotional, and social influences that drive how we engage with the world. This holds true in a wide range of activities, including language learning.

Language acquisition, in particular, is a complex cognitive process that benefits from various psychological mechanisms. There are numerous activities designed to support vocabulary retention, enhance comprehension, and promote the mastery of phrases and grammatical constructions. These activities engage different areas of the brain, helping learners to internalize and reproduce language more effectively. However, the nature of these activities may vary depending on the context in which language learning takes place. In traditional classroom settings, for instance, face-to-face interactions, immediate feedback, and a structured environment contribute to the learning process in ways that may differ from more independent, self-paced methods.

When it comes to distance language learning, the dynamics shift. Although many of the core activities designed for language acquisition remain similar, the learning experience is somewhat altered. The lack of in-person interaction, the reliance on technology, and the increased need for self-discipline can all influence how learners engage with the material and retain new information. Distance learners may face unique psychological challenges such as feelings of isolation, time management difficulties, or a lack of motivation without the physical presence of an instructor or classmates. On the other hand, distance learning can also offer advantages, such as greater flexibility, personalized pacing, and the ability to engage with diverse resources.

To better understand how psychology influences distance language learning, it is essential to explore the cognitive and emotional aspects of this learning modality. In this paper, we will delve into how distance learning, the terms as metacognition, translational distance and learning analytics in the language acquisition process. By understanding the psychological dynamics at play, we can identify strategies to enhance learning outcomes and support learners in overcoming challenges specific to distance education.

1. Metacognition

Metacognition is the ability of the students to control and regulate their own learning. Metacognition is the ability of the learners to observe their learning, to monitor their progress, to assess their learning and by doing all of that, to take control of their own learning. It has a lot to do with becoming an independent learner. A lot of issues are included in metacognition such as

knowledge and control of the knowledge, self-management, self-assessment and all these leads to learners becoming autonomous leaners. This is one of the most important characteristics that learners should have in the contemporary methodology of English Language Learning.

In the attempt to discuss distance education from a psychological point of view, we have come to the term's metacognition, transactional distance and learning analytics. We will pay attention to each term separately and we will elaborate on their relationships and their function in distance education.

Carrell (1998), while researching other issues, has come to the same term. According to her, metacognition is defined as "cognition of cognition" or "thinking about thinking". In defining metacognition, we should also consider the term metacognitive strategies for learning that are related to deeper thinking about the process of learning, planning and monitoring learning, understating while it happens and self-assessment when the learning process comes to an end. If there is no metacognition, the learners will not be aware of their understanding issues, so they will not be able to use the learning strategies they have acquired.

Baker and Brown (1980) define cognition as intellectual proofs of obtaining, transforming, storing, renewing and using information, a mental process of knowledge, awareness, thinking, perception and memory. Metacognition, on the other hand, consists of two processes, monitoring your own progress while learning and making changes if you realize it is not going in the right direction.

Flavell (1979) observes that monitoring a wide range of cognitive activities includes action and interaction of four phenomena: metacognitive knowledge, metacognitive experience, goals (tasks) and activities (strategies). He introduced the concepts of metacognitive knowledge and metacognitive regulation as two pillars of metacognition. He adds that metacognitive knowledge is the knowledge stored in the world of the learner considering that people are cognitive creatures with different cognitive tasks, goals, activities and experiences. Metacognitive regulation refers to learners' application of metacognitive knowledge and skills to manage their own learning process. Metacognitive experience, on the other hand, is composed of some cognitive experience related to intellectual activity that the person is aware of.

Abromitis (1994) considers how metacognition is different from cognitive processes. It is developed in the neocortex of the brain and according to neurologists, this function differentiates humans from other animals. Speaking is a precondition for metacognition. Metacognition is developed at the age of five. However, metacognitive ability is reached at the age of eleven.

Baker & Brown (1980) speak about the importance of metacognition in critical thinking. They say that metacognition is knowledge and control over the learner's thinking and learning activities. Metacognition is related to understanding the personality, the cognition of personality, which is metacognitive knowledge. It is actually thinking about thinking, i.e. it is related to self-regulated thinking - what people know and how they apply it in a certain task. Rasekh & Ranjbary (*2003) explain that metacognition is interpretation of the current experience and thinking about what somebody knows or does not know in fulfilling the task.*

Boyer, Maher & Kirkman (2006) hold the opinion that in an online environment, the basic transformation of course materials to online materials is not sufficient. They say that other phenomena play an important role in distance learning. One of them is metacognition. The individuality of each learner, which is the key factor for a learner-centered approach, is very important in their study. These participants, as they state, own metacognitive awareness – an understanding of how they think and learn, something of immense importance for distance learners.

Zhao & Ye (2020) research also shows that learners in distance education must be effective in managing their own learning. To take full advantage of the online programme, especially in the asynchronous form of DE, students work on their own and they need high level of metacognitive skills. Another term that these authors mention is metacognitive calibration. It is defined as the accuracy of the learner's perception of their own performance. The calibration, as it is stated, reflects the learners' ability to monitor their learning performance and to know what they know and what they do not know. Hence, students having more accurate metacognitive calibration are more conscious of their learning and they are also more strategic in the learning process. Moreover, the authors suggest that metacognitive calibration is related to academic success in an online environment. They proved that metacognitive calibration influenced the better performance on the online assignment, and this led to a better exam grade for the subject learnt in an online course, of asynchronous form.

Moreover, Carolina Torres Escobar (2021) emphasized the fact the in the shift to distance education, students need to enhance self-regulation and metacognition and be the leaders of their educational process and results. In addition, teachers must help students recognize what it means to learn online compared to the classroom and teach students self-regulatory strategies. Furthermore, they should discuss with the students what their problems, limitations and difficulties are.

Finally, as the studies have shown, we can conclude that metacognition is an important aspect in distance learning. It is self-awareness and awareness of our own capacities. If the learner's metacognition is developed, he/she will be able to deal with any task. If the learner is metacognitively mature, he/she will know which strategies to apply in the task he/she is dealing with. On the other hand, if the learning does not go as planned, then the learner has to make changes and apply other strategies. Hence, self-control and self-monitoring are the key elements of metacognition. This issue should concern teachers as well. They need to teach learners that they themselves are responsible for their own successes and failures and that they can contribute to becoming more successful learners.

4. Transactional distance

Another important term that we encounter when we speak about the psychological aspect of distance education is the transactional distance. What is 'transactional distance' and how does it contribute to better understanding of distance education?

Elyakim et al. (2017) define transactional distance as separation between students and teachers in distance education that could result in pedagogical, collaborative and other difficulties.

The term transactional distance was created by Moore in 1993, who borrowed the term transaction from Boyd, to express mutual relations between the learning environments and the individuals that are active in it. Moore (1993) explains that the first attempt in England to provide a theory of distance education was in 1972 and later that theory was called transactional distance. He adds that it is a theory that describes the world of teacher-student relationships when they are separated by space and/or time. Furthermore, the transactional distance in distance learning happens when professors and students operate in an environment of separation. This separation affects teaching as well as learning, as there is psychological and communicational space to be crossed. This psychological and communicational space is what transactional distance represents. This transactional distance relies on three clusters of variables: Dialogue, Structure and Learner's Autonomy.

Moore (1993) further suggests that dialogue and interaction might be synonymous, but not equal concepts. While dialogue is always positive, interaction can be neutral or negative. It all depends on the willingness of the teacher and the learners. The final conclusion is that the extent of overcoming the transactional distance depends on the possibility for dialogue between the learners and the instructor. Regarding the structure, if there is more flexibility in the programme that will result in greater teacher-learner communication, then the possibility to overcome transactional distance is bigger. If the programme is structured in a way that the dialogue between teacher and learners is non-existent, the transactional distance is high. In the end, these three variables are connected, since the greater the structure, the lower the dialogue, and the less autonomy the learner can exercise. So, teaching in distance education is not a simple task and requires careful planning by professionals. From this, it can be inferred that distance education is in the hands of innovative educators who have the chance to both expand student autonomy while also reducing distance.

Elyakim et al. (2017) speak about transactional distance in terms of gender. Their findings suggest that girls tend to enhance their sense of community using communication skills which makes them feel less lonely and thus their transactional distance is diminished. They also pay more attention to the planning stage of learning, which also reduces their transactional distance sense compared to boys. On the other hand, distance learning is preferred more by boys than by girls.

According to Yilmas & Yilmas (2020), transactional distance is composed of three components: student-student, student-teacher and student-content interactions. As the number and quality of these interactions increases, the transactional distance decreases. Furthermore, with the decrease of transactional distance perception, learning can become more effective.

Stein et al. (2005) examine the satisfaction of learners from distance education in both forms. They state that the clear structure of the course such as learning objectives, activities, assignments, planned instruction and evaluation as well as the dialogue between the instructor and the learners are important. What is more, they say that high structure but low dialogue increases the transactional distance. On the other hand, Stein et al. (2005) state that transactional distance is lessened if there is a high level of dialogue and little predetermined structure, as learners are able to participate in the modification of the instructional materials, to satisfy their needs and they receive an ongoing guidance from the instructor. What is important in distance education is to have

increasing dialogue with the instructor and well-structured material that meets the learner's needs. Thus, transactional distance is lowered on the one hand and learner's autonomy is increased on the other hand. The authors also point to the fact that in the synchronous form of DE, videoconferencing contributes to increasing the dialogue, but structure decreases, which leads to decreasing of transactional distance. What is more, the authors found out that learners regard asynchronous communication as being out of the comfort zone. Finally, we can conclude that the synchronous form of DE goes in favor of reducing the transactional gap, while the asynchronous from of DE does not.

In the end, we can conclude that there is a transactional distance in distance education. The gap is there, due to the physical separation of the participants in the process of education. If teachers want to improve distance education, they need to define and acknowledge all elements and find the best solutions that will guarantee academic progress.

5. Learning analytics (LA)

Learning Analytics refers to the use of data, statistical analysis, and computational techniques to understand and improve the learning process. It involves collecting, measuring, analyzing, and reporting data related to learners' interactions with educational systems and their performance. The goal is to gain insights into how learners are engaging with content, where they may be struggling, and how they can be supported more effectively to improve learning outcomes. Siemens & Gasevic (2012) point out that LA is related to measuring, collecting, analyzing and reporting of data in relation to the learners, for the purpose of better understanding the process of learning and more successful improvement. It is expected from LA to provide clues on educational practices in order to improve teaching, learning and decision-making. How can LA provide clues? Every time learners engage in the learning process, data trails are created. These data trails can indicate different things such as how different learners understand different course content in any form of distance learning.

Ali et al. (2012) speak about LOCO – Analyst, a LA tool for providing feedback to educators about their students' performance and activities. LOCO is an acronym standing for Learning Object Context Ontology. Ali et al. (2012) also say that the key notion for the LOCO tool is the learning context, which is defined as an interplay of learning activity, learning content and participants. What is more, the authors confirm that there are other LA tools that focus on different points, such as Teacher ADVisor (TADV), Student Inspector, GISMO, CourseViz etc. The analyses that these tools provide can be divided into two groups: local and global. Local tools give immediate feedback on the students' activities, such as results on quizzes. Global tools do not give immediate feedback, but inform students and educators on the whole learning process. LOCO Analyst as a global tool provides two types of feedback: feedback about different learning objects (lessons, tests and learning modules) as well as feedback about individual students (student's interaction with the learning content and with the other students in the group).

Fernandes-Gallego et al. (2013), who based their research on 3D Virtual Worlds, speak about how learning helps teachers know what is happening in the learning process. This information is very important for planning the further steps in teaching, to adapt the learning process in the way it best suits the learners.

Learning analytics is a tool at the disposal of the 21st century teachers who want to understand the learners and their learning process well with the purpose of improving teaching and contributing to the success of the students. According to Yilmas & Yilmas (2020), LA enables teachers to enhance the effectiveness of teaching, to locate learners that are at the risk of academic failure for the purpose of providing interventions. Moreover, as we already defined metacognition, and we know how important it is in education, we can say that these two authors consider LA as a metacognitive tool in the hands of the teacher. It is said to be a metacognitive tool in an online environment that teachers can use to raise students' awareness of their own learning outcomes and behaviors. The teacher is supposed to give recommendations to learners, even personal recommendations, about their planning, monitoring and evaluation of the learning process. In fact, learners develop their own awareness by seeing the results.

Another thing that LA can reduce is the perception of transactional distance, as it was mentioned previously by Yilmas & Ylmas (2020). When the learner looks at the LA results regarding student-student, student-teacher and student-content interactions, the current status of his learning process can be estimated. For example, the student might realize that his participation in group activities is poor, that he does not contribute to group work. Thus, the student can work on that issue, hence improving student-student interaction. By improving this interaction, the transactional distance decreases. What is more, by providing this information to students, the teacher will improve student-teacher interaction. By directing students to the right content, student-content interaction will improve. Therefore, the perception of transactional distance will significantly decrease.

Siemens (2019) speaks about LA and its state of maturing. While researchers are still interested in receiving algorithmically generated insights on the processes that happen in distance learning, there is a parallel challenge in endangering individual ethics and privacy. The author also states that while LA is improving in giving analyses about learning, it is still addressing cultural and social challenges. Another interesting aspect that learning analytics has explored is gamification, i.e. how games in a non-game educational setting improve learner's engagement as well as learner's performance. The results show that gamification is effective and if it is added to learning, then the interest of learners is captured.

Learning analytics is a powerful tool in the hands of the teachers that can be used to improve distance education in many ways. Teachers can offer advice and recommendations to students via LA reports. Based on the reports, students can be asked metacognitive questions, thus encouraging them to think metacognitively. And we have already discussed how important metacognition is for learning. In that way students can plan, monitor and evaluate their own learning. All of this contributes to improving academic scores. Thus, students' motivation increases on the one hand, but the transactional distance decreases on the other hand. By decreasing the transactional distance, the gap between students and learning is becoming smaller and it might disappear. Finally, we can conclude that learning analytics is a powerful tool in distance education.

Conclusion

We live in a modern era, advanced technology and deeper understanding of the processes that happen when learning begins. Moreover, using empirical evidence, we can now tell what goes in

favor of developing a successful learner and what does not. There are numerous researches on metacognition in traditional face-to-face education. The notion of metacognition, i.e. the ability of learners to plan, monitor and evaluate their own learning, was a big breakthrough in education. Metacognition tackles the issue of learner's autonomy.

Nowadays, dealing with the new challenge, distance education, we must explore its depths and see what functions in favor of it and what does not. From the literature review, we came across the term transactional distance, which is kind of a gap, a separation between the students and the teacher that can influence the learning outcome. We have seen that it consists of three types of interactions, student to student, student to teacher and student to content. The better these interactions function, the greater results will be seen in learning. Thus, the transactional distance is reduced.

Finally, we have come to another term, the learning analytics (LA). This tool can function as a metacognitive instrument in distance education. When students take part in distance education, they leave tracks. Learning analytics deals with these tracks providing LA reports to teachers, which can be used to give advice and personal recommendations to each student and to make them think metacognitively. In that way they will assist individualized learning on the one hand and they will help students plan, monitor and evaluate their own learning in distance education.

To conclude, this paper discusses the advancements in education through technology and research, particularly focusing on metacognition, which helps learners plan, monitor, and evaluate their own learning. It highlights the challenge of distance education and introduces the concept of "transactional distance," referring to the gap between students and teachers that can affect learning outcomes. The paragraph explains that improving interactions between students, teachers, and content can reduce this distance. It also introduces learning analytics (LA) as a tool in distance education, using data to support metacognitive practices by providing feedback and personalized recommendations, thereby enhancing individualized learning and encouraging students to reflect on their own learning process.

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