
ENGAGING STUDENTS FOR ONLINE INSTRUCTION THROUGH METACOGNITIVE STRATEGIES

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Abstract: In the midst of the pandemic that led to the transformation of face-to face interaction between teachers and their students into online learning, instruction is organized in digital classrooms in the form of video meetings. As a result, numerous challenges for both teachers and learners emerged. The teacher is to provide not only synchronous and asynchronous instruction through some of the available online learning tools, such as learning platforms, applications and programmes, but also various audio contents, reading materials, exercises, and tasks for individual use. Therefore, students should be aware of the situation, and they should be acquainted with the use of autonomous learning resources for achieving learning objectives and resolving learning difficulties, that is, they need to know how to use resources for facilitating learning, also known as language learning strategies.

Keywords: online instruction, digital environment, language learning strategies, metacognitive strategies

1. INTRODUCTION

Since Covid-19 pandemic caused the closure of schools and universities across the globe, and the disruption of lecturing in person and in-class instruction, teaching and learning in virtual classrooms or digital environment in general emerged. Thus, both students and teachers needed to adapt to studying and teaching remotely. The transfer to online instruction posed numerous challenges. In this unprecedented time, it is important to create positive online learning experience, which puts pressure on both teachers to meet the required online teaching standards.

In this paper, a questionnaire was administered to English language students of Academy for technical and preschool professional studies based in Niš, in order to investigate metacognitive vocabulary learning strategies. In the future, students should learn how to develop their language learning strategies and their metacognition to achieve better results in vocabulary learning.

2. DIGITAL ENVIRONMENT CHALLENGES

Information and communication technologies are very important prerequisite for successful implementation of many activities in the modern world, including e-education. Therefore, according to the Institute for statistics in Serbia, 3.9 million people (out of approximately 7 million inhabitants) used the Internet over the last 3 months of 2018. In comparison to 2017, the number of Internet users in the Republic of Serbia increased by 1.4% in 2018 [1],[2],[3].

The term e-education is widely used to describe educational processes supported by information and communication technologies. For instance, it comprises Computer-Assisted Language Learning in the field of Foreign Language Acquisition. E-education is based on principles of cognitive science, artificial intelligence and pedagogy [2].

A prerequisite for the implementation of online learning is students' digital literacy. In that respect, the internet access is necessary for distance learning and e-education. In that respect, according to the Institute for statistics in Serbia, 3.9 million people (out of approximately 7 million inhabitants) used the Internet over the last 3 months of 2018. In comparison to 2017, the number of Internet users in the Republic of Serbia increased by 1.4% in 2018. Observing the level of education among the Internet users, 90.8% of them has higher education, 83% has secondary education, while 46.9% has lower than secondary education. In terms of employment, the largest number of Internet users are students [1],[2],[3].

Information and communication technologies are prerequisite for successful implementation of activities in e-education. The term e-education is widely used to describe educational processes, based on the principles of cognitive science, artificial intelligence and pedagogy supported by information and communication technologies. For instance, it comprises Computer-Assisted Language Learning in the field of ESL (English as a Second Language) and EFL (English as a Foreign Language) [4].

3. ORGANIZING ONLINE INSTRUCTION AND ENGAGING STUDENTS IN DIFFICULT TIMES

Online learning can be synchronous or asynchronous, where the former signifies that students are obliged to log in to participate in online video lectures at a specific time each week, and the latter enables them to see lesson materials each week at any time. Although synchronous learning option includes live video lessons and asynchronous learning options exclude any live video lessons, they may be included in the same programme. Synchronous classes are

scheduled at specific hours, where all students and instructors are present. They are held online at the same time. Instructors deliver their lectures in virtual classrooms, where discussions and presentations occur at specific time. Furthermore, blended learning as a combination of online instruction and classroom instruction is another possibility. When teaching students, online instructional materials in online learning and classroom instructional practice within in-person learning experience can be applied together and combined in blended learning. Whether distance learning is synchronous, and/or asynchronous, or blended, certain problems emerge. Adapting to the new routine and utilizing new tools, building motivation, establishing discipline, eliminating distraction, persuading everyone that technology is beneficial, familiarizing with the new technologies, used for online education within online learning platforms, such as Moodle, Google classroom, Google meet, Microsoft Teams, Adobe Connect, etc. Some of them, like Nearpod, for instance, can help educator make their lessons interactive, as their presentations may contain interactive content, such as Quiz, Poll, Collaborate board, etc. It is important to emphasize that higher education wasn't disrupted, but transformed into online form, still causing discomfort among some teachers and students. In an attempt to engage students into this novel, yet not entirely new form of studying, there is a need to understand how students can best apply self-regulated learning strategies to achieve academic success within the online environment [5].

4. METACOGNITIVE STRATEGIES

Metacognitive strategies are a part of language learning strategies as specific conscious efforts students invest in order to facilitate their learning. These are tools, techniques, behaviours, activities, steps students take in order to improve the learning process. They are usually evaluated by means of Oxford's questionnaire called Strategy Inventory for Language Learning [6], [7]. Student can upgrade their achievements in language learning through their efficient strategy use, as it is recommended by *Common European Framework of Reference for Languages* [8]. Metacognitive strategies are problem-oriented operations that help students understand the way they learn. i.e., learning strategies that encourage learners to focus on the mental process underlying their language learning [9]. Thus, metacognitive strategies are used to monitor language learning processes as cognitive mechanics, and to enable students to effectively plan and regulate these processes within specific problem-solving tasks. Accordingly, they are oriented towards selective attention, inclusive of focusing on special aspects of learning tasks), planning, monitoring, and evaluating one's learning, such as checking comprehension in receptive or productive language activity [10], [11].

As teachers were forced to pivot online on very short notice, teaching students metacognitive strategies that would help students to cope with working online and individually wasn't their priority. However, developing metacognitive strategies in online learning environment is of utmost importance since research show the strategies of time management, metacognition, effort regulation, and critical thinking were positively correlated with academic outcome [5]. Owing to the absence of in-class instruction, the teacher could assume the role of helping students self-regulate, and thus regulate both their emotions and their learning process, as well as to effectively plan their learning. That is why metacognitive strategies can be of utmost importance for online learning development and student engagement.

Since everybody is learning how to cope with the situation and trying to figure out the best way to transfer their classroom lessons into digital environment and to engage students in language learning from home, teachers realize the necessity to explain students to self-regulate, especially when they are to meet the deadlines, and to manage their working activities in general. Also, the teacher should maintain variety of activities, introduce ice-breaker activities, develop students' empathy and interests, trigger engagement and curiosity, ask them about their feelings, and create overall positive emotional climate [12].

In order to engage students in online learning experience, the teacher should keep the screen constantly moving, use visual content (photos, videos, movies, etc.), variety of interactivities, and chat box, gather data on students' participation, establish regular practices, develop and upgrade four language skills (speaking, reading, listening and writing), etc.

5. METHODOLOGY

The research was carried out among 92 (38 male and 54) female students studying ESP (English for Specific Purposes) at the first year of their studies in Vranje (Serbia) in 2020. The questionnaire was administered online in order to investigate metacognitive vocabulary learning strategies.. The questionnaire was administered to students of Academy for technical and preschool professional studies based in Niš. It was aimed at investigating metacognitive vocabulary learning strategies.

Before joining Microsoft Teams, as a platform chosen by the educational institution in question to organize video meetings, students were asked to participate in a survey. 92% of students stated they could participate in online

learning, while the rest claimed they could not attend online meetings due to following reasons. They are either going to be at work at the time when video lectures are presented, or they have bad internet connections, or the lack of digital literacy or digital skills in general.

The aim of this study is to explore ESP students' metacognitive awareness of vocabulary learning strategies by means of a questionnaire is investigated.

6. RESULTS AND DISCUSSION

The following data are gathered about the respondents who participated in the research. There have been 38 male and 54 female students. Their average age is 20 (AM= 20.00, SD= 0.66). They have learnt English for approximately 12 years (AM= 11.97, SD=1.54).

Descriptive statistical analysis is carried out to determine the frequency of strategy use. Table 1 shows reported strategy use by ESP students who participated in the research. Descriptive statistical analysis was carried out. Arithmetic mean (AM) and standard deviation (SD) were calculated and the obtained results were analyzed.

Table 1. Descriptive values of metacognitive strategies

Metacognitive strategies	AM	SD
I learn from the mistakes I make in vocabulary learning.	3.75	1.14
I have a clear goal in vocabulary learning.	3.62	1.01
I'm trying to figure out the best ways to learn words.	3.35	1.10
After completing a certain task, I am thinking of how to be better next time.	3.23	1.03
I turn to teachers and colleagues for help in implementing the learning plan.	3.18	0.98
When I start learning a new word, I consider the extent to which I can acquire it.	3.12	1.08
I have an awareness about making a vocabulary learning plan.	3.10	0.88
I always summarize my vocabulary learning to find out about my own achievements and shortcomings.	3.08	1.09
I continuously adjust the plan according to the current situation.	3.02	1.13
I usually think about why I am making mistakes in learning vocabulary.	2.98	1.17
I predict the difficulties and the ways to solve them.	2.90	1.16
When I find that my vocabulary learning strategies are no longer effective, I adjust them in time.	2.88	1.01
Before I conduct a vocabulary learning activity, I think about the purpose and requirements of the activity, including which strategies to use.	2.83	0.89
My plan is detailed, including a deadline for completing all tasks.	2.78	0.98
I always summarize the methods of learning new words.	2.77	1.09
I'm considering how to realize my vocabulary learning plan.	2.75	1.05
I know when to use certain vocabulary learning strategies and how to use them.	2.73	0.97
I know about my colleagues' vocabulary learning experiences.	2.72	1.06
I always check if there is a mismatch between the current situation and the goals set in the plan	2.70	0.98
I dedicate time to memorizing words every day.	2.68	1.21
I share knowledge about vocabulary learning strategies with colleagues	2.67	0.84
I often evaluate the vocabulary learning strategies I use to discover problems and ways to solve them.	2.67	0.84
I set a deadline within which I check whether I use vocabulary learning strategies successfully and efficiently.	2.65	0.86
I check my own progress in learning vocabulary at certain intervals.	2.57	1.13
I have a short-term plan and a long-term word learning plan.	2.47	0.83
After classes, I immediately review the words I learned in classes.	2.40	1.11
I check if the word learning plan is implemented on time.	2.38	0.90
I often discuss the learning experience with teachers.	2.22	1.03

The most frequently used strategy is “I learn from the mistakes I make in learning vocabulary” (AM=3.75, SD=1.14), whereas the least frequently used strategy is “I often discuss the learning experience with teachers” (AM=2.22, SD=1.03). The strategy with lowest standard deviation is “I have a short-term plan and a long-term vocabulary learning plan” (SD=0.83), which indicates the lowest level of discrepancies in students' answers.

Students perceive their mistakes as learning experience, which is a positive learning attitude towards making mistakes and errors, as they are the inevitable part of the learning process. The results also indicate that their use of metacognitive strategies is moderate. Thus, there is room for improvement. Students should learn how to develop their language learning strategies, especially their metacognition, i.e., raise their metacognitive awareness, to achieve better results and improve overall attainments in language acquisition.

7. CONCLUSION AND PRACTICAL IMPLICATIONS

This paper outlines the major aspects of metacognitive strategy use in vocabulary acquisition and provides insights of metacognitive vocabulary learning strategies. The analysis of the research conducted with a group of students studying EAP confirms that metacognitive strategies in vocabulary learning are not significantly used in the learning process. If they are to be used purposefully, students should be not only more involved in the exchange of information and educational materials, but also trained to use them more effectively. Strategy training in this area could be organized by an ESP teacher. As a result, research should also be undertaken to inspect the effectiveness of strategy training.

ESP course design has already been transformed by introducing new technologies used for e-education and online learning. As the educational process imposes the need for constant research, adaptation and implementation, possible pedagogical implications of the research are that its results would eventually affect ESP course design with regards to engaging students to participate in online activities.

In that regard, the results of the analysis can be used to improve learning and teaching processes, to pave the way for the use of both vocabulary learning strategies and reading strategies, as a sub-branch of language learning strategies, at tertiary level of educational more efficiently. Accordingly, the ability of ESP learners becoming more responsible for their own learning needs to be increased.

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