



CHALLENGES IN USING ACTIVE LEARNING IT STRATEGIES IN FOREIGN LANGUAGE TEACHING FOR HIGHER EDUCATION

Milica Pančevac*,
[0009-0007-6011-3014]

Ana Tripković
[0009-0009-4541-7380]

Singidunum University,
Belgrade, Serbia

Abstract:

This paper examines the difficulties of applying IT strategies for active learning in foreign language instruction at higher education institutions. By integrating artificial intelligence (AI) and information and communication technologies (ICT) with active learning, which is already recognized for improving student engagement and encouraging critical thinking, its importance has been continuously growing. These technologies provide enhanced accessibility, interactive content, and customized learning experiences. Their use in teaching foreign languages, however, brings several difficulties.

The attitudes of foreign language teachers in higher education were explored through a survey indicating that they are aware of both benefits and challenges. Digital literacy among teachers and students was found to be one of the main issues. Students may find it challenging to adapt to new digital learning environments, while educators may encounter difficulties in effectively integrating technology without adequate training. Teachers are further burdened by the need for ongoing professional development due to the quick evolution of IT. The accessibility of technological resources is another important concern. Financial limitations frequently prevent institutions from purchasing and maintaining the required infrastructure. Furthermore, survey respondents stated that technical issues are the most common source of disruption.

The review of relevant literature, along with the responses provided by teaching professionals, suggests solutions such as focused professional growth and calculated investments in IT infrastructure. Higher education institutions will be able to employ IT strategies in active learning for foreign language instruction more successfully if these problems are resolved.

Keywords:

Active Learning, IT Strategies, Higher Education, Challenges.

INTRODUCTION

The implementation of IT strategies for active learning in higher education, in particular in teaching foreign languages, presents several significant challenges. The main problem is the existence of various levels of technological competence among students and instructors, which can hinder the effective use of digital tools (Bao, 2020). Since most institutions rely on online platforms, comprehensive training and support are essential to ensure that educators can integrate these tools effectively in their pedagogical practices (Jovanović 2015).

Correspondence:

Milica Pančevac

e-mail:

mpancevac@singidunum.ac.rs





Additionally, the lack of involvement and motivation among students can represent a significant barrier to active learning strategies. The use of game-based technologies, such as Kahoot or Quizzes have been shown to improve the involvement of students and facilitate a more interactive learning environment (Plump & Larosa, 2017). However, the challenge which remains is in ensuring that these strategies are applied consistently (Rapanta et al., 2021). In addition, the flipped classroom model has been proposed as an effective means to promote active learning in linguistic education, but its success largely depends on the preparation of students and the desire to engage with pre-class materials (Foldnes, 2016). In order to deal with these challenges, higher education institutions must give priority to professional development for educators and encourage a culture that enhances collaboration and innovative teaching practices thereby improving the results of learning foreign languages (Niemi et al., 2016).

2. REVIEW OF LITERATURE

The theoretical framework of active learning relies on constructivism and socio-constructivism which promote the role of students as active participants in the knowledge acquisition process [1]. Constructivism indicates that learners develop their own understanding through interactions with their environment and prior knowledge [2]. Eminent social constructivist Lev Vygotsky [3], described the concept zone of proximal development (ZPD). This is the field where learning activities should be centered, between what the learner can accomplish independently and what the learner can complete with expert guidance. ZPD basically refers to eliciting students' ability to acquire knowledge on their own while also examining and suggesting that students are capable of acquiring more easily more complex concepts with the help of peers and professors. According to constructivists, knowledge is fundamentally subjective and is created by our shared perceptions and customs [4]. On the other hand, social constructivists claim that social interaction and conversation are the best ways for this process to occur because they let us compare and contrast our own understandings with those of others.

3. THE IMPORTANCE AND BENEFITS OF ACTIVE LEARNING IN FOREIGN LANGUAGE TEACHING

The most important methods which motivate students to think critically are those that use problem-solving practices and collaboration [5]. Some of the benefits of active learning are [6]:

- **Improved Understanding and Retention of Information:** Active learning strategies, such as collaborative tasks, peer teaching, and problem-solving activities, engage learners both cognitively and emotionally leading to enhanced memory retention, unlike traditional passive methods [7]. Interactive activities deepen the understanding of complex linguistic concepts [8]. Moreover, active learning activities facilitate the process of reflection and students can apply learned concepts to real-life situations with greater ease [9]. These insights illustrate that active learning strategies support the process of retention.
- **Development of Critical Thinking:** It is discussed that active learning actually facilitates the process of analyzing, synthesizing and assessing information and in this way, students are not just passively absorbing information [10], they are involved in creating them. Peer interactions are promoted by incorporating active learning strategies such as discussions, debates, project-based learning, peer teaching which is of crucial importance for critical thinking development [11].
- **Increased Motivation and Engagement:** Active learning strategies, especially when combined with collaborative learning, have been shown to significantly boost students' motivation and academic performance. One of the studies shows that a repeated measures experimental design across multiple engineering programs implies 14% improvement in student performance after implementing active learning techniques [12]. In addition, it was assessed that the impact of active learning on student motivation in a process control course resulted in increased motivation and improved performance for 40% of students [13]. Active learning also nurtures students' autonomy [14], giving them greater control over their learning process.



- **Enhanced Social and Communication Skills:** Many studies confirm that active learning methods not only improve academic outcomes but also foster critical thinking, social skills and communication skills. According to Yaacob and Mahmud [15] who incorporated active learning with social skills training in higher education and applied both qualitative and quantitative methods to assess students' social skills development, it was revealed that students who engaged in group discussions and collaborative tasks improved not only their communication but also interpersonal abilities. Agbatogun [16] explored the impact of active learning on second-language learners' communicative competence, using clicker technology [17] and communicative tasks. Surveys and language assessments indicated that active learning helped students improve their ability to communicate in target language.

4. THE INTEGRATION OF AI AND INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) INTO ACTIVE LEARNING STRATEGIES IN FOREIGN LANGUAGE TEACHING AT HIGHER EDUCATION INSTITUTIONS

4.1. CONTEXT

The implementation of artificial intelligence (AI) and information and communication technologies (ICT) into active learning strategies represents remarkable progress in foreign language teaching at higher education institutions. This approach enables personalized learning, boosts student engagement, and improves learning outcomes [18].

- **Personalization and Adaptive learning** [19] involve using technology in order to adjust materials, lessons, handouts, presentations etc. to individual students' needs taking into account the students' weaknesses and potentials. Using AI, lecturers can provide customized handouts, papers, assignments, and feedback. As a result, students can progressively advance according to their abilities. AI makes it possible to design learning programs that adapt to each student's unique requirements and learning styles [18].
- **Interactivity, Student Engagement and Automated Feedback and Assessment:** The creation of interactive platforms that promote active student participation is simplified by the integration

of AI and ICT in foreign language instruction. These types of AI-driven tools also enhance students' interactive experiences, enabling more authentic and engaging language use in real-life situations [20]. Studies have shown that automated feedback systems dramatically boost student engagement and motivation [21]. AI-based tests, like speech recognition and grammar checkers, can provide comprehensive information about students' language skills, enabling teachers to address the challenges that need to be resolved more successfully. These tools assist teachers to improve their methods of instruction and to promoting learning [20].

5. CHALLENGES IN THE IMPLEMENTATION OF IT STRATEGIES FOR ACTIVE LEARNING IN HIGHER EDUCATION IN THE CONTEXT OF FOREIGN LANGUAGE TEACHING

- **Lack of Technological Infrastructure:** One of the biggest challenges to the effective application of IT-based active learning strategies, particularly in the context of teaching foreign languages, is the technological infrastructure within institutions. Lower funding is the main reason for this [22]. Moreover, it implies the fact that acquisition and maintenance of advanced IT resources can be financially challenging for some universities.
- **Varying Levels of Digital Literacy:** Digital literacy is particularly noticeable in foreign language courses, where encouraging active learning requires the use of interactive applications, online collaboration platforms, and digital language resources. On the one hand this can influence students' engagement and instructional efficacy [22]. Moreover, disparities in digital proficiency hinder teachers from effectively integrating IT strategies into their lessons [23].
- **Instructor Training:** Many educators find it difficult to adapt their traditional teaching methods to incorporate digital resources, which can limit the effectiveness of active learning approaches [24]. The lack of tailored professional development, lecturers' digital literacy can hinder the implementation of online teaching strategies, ultimately impacting the quality of instruction and student participation [25]. To resolve this problem, universities must invest in training programs that provide educators with the skills and knowledge required to use IT tools effectively in the foreign language classroom.



- **Student Motivation:** If students do not comprehend how technology enhances their learning, they are less likely to participate in IT-based activities [26]. In order to overcome this challenge, teachers need to show students the benefits of IT-driven learning and design activities that encourage motivation and active participation.
- **Language Barriers:** Various digital tools are made in English, which can be challenging for non-native speakers to use. Chapelle [27] argues that language barriers in digital environments can cause frustration and lower levels of motivation, especially when neither lecturers nor students are competent and experienced in using the IT tools. These barriers can also lead to resentment and lower motivation.

6. RESEARCH

6.1. CONTEXT

The research was conducted with 40 foreign language teachers who work in higher education with the aim of getting their attitudes towards using active learning IT strategies in their work and identifying possible obstacles they might be facing. They were sent an online survey consisting of 15 questions, six of which were close-ended multiple choice questions, two checkbox questions allowing multiple answers and adding additional information, four Likert scale questions (ranging from 1 to 5) and three open-ended questions.

To evaluate the data from this small-scale study, a mixed-method approach was used, combining quantitative descriptive statistical analysis of close-ended

questions—performed using IBM SPSS Statistics software (version 26)—with a qualitative analysis of open-ended responses.

6.2. QUANTITATIVE RESEARCH

The sample consisted of 35 female (87.5%) and 5 male (12.5%) participants, with the majority (25 or 62.5%) being language teachers and a significant number of associate professors (8 or 20%). In total 29 teachers (72.5%) have more than 11 years of teaching experience which is an interesting fact, since 18 (45%) participants have more than 11 years of experience in higher education. Overall, it can be concluded that the sample consists of highly experienced professionals predominantly teaching English language (34 or 85%).

Pearson correlation coefficient does not show really strong statistical correlation between any of the given variables and the only moderately strong correlation visible is the one between confidence in using IT strategies and familiarity using active learning IT strategies. A correlation of 0.724 suggests that as confidence in using IT strategies increases, familiarity with IT Active Learning Strategies also tends to increase. Since $p < 0.01$, the correlation is statistically highly significant.

Table 1 presents descriptive statistics for Likert scale questions from the survey. The mean values of 3.80 for most questions and one 3.73 indicate that most participants feel confident and familiar with the given strategies. However, standard deviation suggests that most participants have different opinions about the significance of institutional support.

Table 1. Descriptive statistics for questions about active learning IT strategies

Question	Minimum	Maximum	Mean value	Standard deviation
How would you assess your familiarity with IT active learning strategies?	2	5	3.80	0.883
How much is institutional support significant for successful implementation of active learning strategies?	2	5	3.80	1.018
How frequently do you integrate IT-based active learning methods into your teaching?	1	5	3.73	0.987
How confident do you feel using IT strategies?	1	5	3.80	0.939



Language teachers in higher education claim to be using all kinds of active learning strategies, predominantly choosing interactive quizzes and AI-driven tools (32=80% and 27=67.5% respectively). The most challenging thing in using these activities is technical issues (26 participants = 65%) and an interesting finding is that 16 teachers (40%) claim that lack of training can be an obstacle, even though a vast majority is highly experienced.

Overall statistical data emphasize positive perception of active learning IT activities. This is further highlighted in the answers to the question about the fact that these activities enhance students' engagement and participation, where 85.2% (33 participants) agreed with the statement, whereas only 7 of them were not sure about it and not a single participant believes this is not true.

7. QUALITATIVE RESEARCH

For the qualitative part of the research, participants were asked some open-ended questions and the answers show a lot of interesting insights into the major obstacles and opinions of teachers towards active learning IT strategies. Given that the major obstacle for most respondents was technical issues, there are numerous suggestions on how to deal with them. One of the subjects wrote "Plan ahead: Select IT tools that are user-friendly and require minimal setup." Then it was suggested to check all the tools and the internet connection before the lesson, prepare printed backup material or another activity, practice using the tools before applying them in the lessons, learning about them from workshops, YouTube videos or self-study materials. Thus, it can be concluded that there is always a backup plan, often stemming from experience and in case that doesn't work, six colleagues refer to IT support at universities.

When it comes to pedagogical challenges that might be encountered, there is a range of interesting responses. Five respondents claim they almost never face such challenges. In contrast there are statements that sheer variety of options can be overwhelming, which is connected to the lack of time for working on new tools. Additionally, even though students get used to it over time, they are also the ones who might feel overloaded with complex programs. Varying levels of digital literacy and language proficiency in students could also cause issues but "keeping students actively involved and avoiding passive consumption" is another challenge teachers might face. Even though students perceive these activities as fun, but they sometimes do not see the learning goals, or, as

one participant stated, they lose interest in traditional textbooks and it gets increasingly difficult to motivate them. Moreover, engaging students who are not confident is identified as an issue, but another response mentions that sometimes, in anonymous activities, certain students do not even participate.

Teachers may spend too much time on preparing such activities, for this reason one of the participants claims that they do not use these activities even though they are aware of all the pros and cons of using them, simply because teachers have to do extra work due to small salaries and do not have time to learn more things about these strategies.

Finally, as suggestions or additional strategies respondents claim that some flipped classroom activities might be efficient where students have to do certain tasks at home, before coming to class and then engage in activities. Another suggestion is to use them as a treat, as a reward, rather than incorporating it in a lot of activities. Similarly, it is advised to provide additional points.

An amazing array of resources was mentioned within the survey and here is the list: Hot potatoes app, bamboozle, WordWall, Canva, Storyboard, Vocaroo, Google docs, AI powered language tool, Socratic Seminar through Google classroom and Microsoft Teams. The fact that a lot of teachers specifically mentioned tools they had been using in their teaching shows the importance and prevalence of such activities in everyday lessons.

8. CONCLUSION

The research emphasizes both challenges and potential of including active learning IT strategies for teaching foreign languages at the university level. While new digital tools bring more positive energy and clearly show enhanced language acquisition, they also pose huge issues when it comes to their integration into standard curricula. Key issues such as varying levels of digital literacy among students and teachers, the lack of adequate institutional support, and the financial constraints on universities hinder the widespread and effective use of these technologies. Furthermore, it is obvious from the responses that regardless of their experience, teachers do expect more adequate training. Addressing the issues raised by them, particularly about additional training, IT support, lack of time, can help successful integration of active learning IT strategies into regular foreign language curricula at universities.



This paper outlines the main problems and advantages from the teachers' perspective, providing only one side of the topic. The suggestions for further research would include the students' view and could focus on specific comparison of results achieved by incorporating active learning IT strategies. Integrating all the suggestions into everyday teaching activities could lead to better language acquisition, but it could also prepare students for the requirements of the new digital age.

REFERENCES

- [1] C. English, "Guided support for writing assessment literacy (GSWAL)," Cambridge University Press & Assessment, [Online]. Available: <https://www.cambridge-community.org.uk/professional-development/gswal/index.html>. [Accessed 28 March 2024].
- [2] J. Piaget and B. Inhelder, The psychology of the child, London: Basic Books, 2008, pp. 84-92.
- [3] S. L. Vygotsky, Mind in Society The Development of Higher Psychological Processes, London: Harvard University Press, 1978, pp. 87-97.
- [4] W. A. Bates, Teaching in a digital age: Guidelines for designing teaching and learning, Vancouver: Tony Bates Associates Ltd., 2015, p. 60.
- [5] J. Allsop, S. J. Young, E. J. Nelson, J. Piatt and D. Knapp, "Examining the benefits associated with implementing an active learning classroom among undergraduate students," *International Journal of Teaching and Learning in Higher Education*, vol. 32, no. 3, pp. 418-426, 2020.
- [6] E. F. Berkley, P. K. Cross and C. H. Major, Collaborative learning A handbook for college faculty, San Francisco: Jossey-Bass, 2005, pp. 95-126.
- [7] S. Freeman, S. L. Eddie, M. McDonough, M. K. Smith, N. Okoroafor, H. Jordt and M. P. Wenderoth, "Active learning increases student performance in science, engineering and mathematics," in *Proceedings of the National Academy of Science of the United States of America*, San Francisco, 2014.
- [8] T. C. M and R. Wylie, "The ICAP Framework: Linking Cognitive Engagement to Active Learning Outcomes," *Educational Psychologist*, vol. 49, no. 4, pp. 219-243, 2014.
- [9] M. Prince, "Does Active Learning Work? A Review of the Research," *Journal of Engineering Education*, vol. 93, no. 3, pp. 223-231, 2004.
- [10] C. Bonwell and J. Eison, "Active Learning: Creating Excitement in the Classroom," The George Washington University, School of Education and Human Development, Washington DC, 1991.
- [11] D. W. Johnson, R. T. Johnson and K. A. Smith, "Cooperative learning: Improving university instruction by basing practice on validated theory," *Journal on Excellence in College Teaching*, vol. 25, no. 4, pp. 85-118, 2014.
- [12] L. M. Guimarães and R. S. Lima, "Active learning application in engineering education Effect on student performance using repeated measures experimental design," *European Journal of Engineering Education*, vol. 46, no. 5, pp. 813-833, 2021.
- [13] Z. Dadach, "Quantifying the effects of an active learning strategy on the motivation of students," *International Journal of Engineering Education*, vol. 29, no. 4, pp. 904-913, 2013.
- [14] C. A. I. Education, "Active Learning," April 2020. [Online]. Available: <https://www.cambridgeinternational.org/Images/271174-active-learning.pdf>. [Accessed 21 February 2025].
- [15] Y. Yaacob, M. M. Mahmud and W. S. Ching, "The impacts of active learning environment on communication skills, thinking and problem-solving skills, and teamwork skills," in *Proceedings of the 4th International Conference on Information and Education Innovations (ICIEI '19)*, Durham, 2019.
- [16] A. O. Agbatogun, "Developing learners' second language communicative competence through active learning: Clickers or communicative approach?," *Journal of Educational Technology & Society*, vol. 17, no. 2, pp. 257-269, 2014.
- [17] V. Nejković and D. Andrejević, "The Impact of The Use of Clicker Tools in Academic Classroom Environments," *The Journal of Teaching English for Specific and Academic Purposes*, vol. 10, no. 3, pp. 407-420, 2022.
- [18] A. Varsamidou, "Integration of artificial intelligence in foreign language Exploring views and beliefs of Greek foreign language teachers," *International Journal of Language and Literary Studies*, vol. 6, no. 3, pp. 299-320.
- [19] T. Cavanagh, B. Chen, R. A. M. Lachen and J. R. Paradiso, "Constructing a Design Framework and Pedagogical Approach for Adaptive Learning in Higher Education: A Practitioner's Perspective," *International Review of Research in Open and Distributed Learning*, vol. 21, no. 1, pp. 173-197, 2020.
- [20] A. Edmett, H. Crompton, N. Ichaporia and R. Crishton, "Artificial intelligence and English language teaching: Preparing for the future," British Council, London, 2023.
- [21] R. Schiller, J. Fleckenstein, U. Mertens, A. Horbach and J. Meyer, "Understanding the effectiveness of automated feedback: Using process data to uncover the role of behavioral engagement," *Computers & Education*, vol. 223, pp. 2-16, 2024.



- [22] T. Bates, *Teaching in a Digital Age: Guidelines for designing teaching and learning* - 2nd Edition, Victoria: BCcampus, 2015, p. 60.
- [23] M. Healey, A. Flint and K. Harrington, *Engagement through partnership: students as partners in learning and teaching in higher education*, Yorkshire: The higher education Academy, 2014.
- [24] D. W. Johnson, R. T. Johnson and K. A. Smith, "Co-operative learning: Improving university instruction by basing practice on validated theory," *Journal on Excellence in College Teaching*, vol. 25, no. 4, pp. 85-118.
- [25] C. A. Hafner, A. Chik and R. H. Jones, "Digital literacies and language learning," *Language Learning & Technology*, vol. 19, no. 3, pp. 1-7.
- [26] A. G. Negoescu and C. M. Mitrulescu, "Using technology to increase students' motivation for learning a foreign language," in *Knowledge-Based Organization*, Sibiu, 2023.
- [27] C. A. Chapelle, "The interface of technology and language learning: Challenges and opportunities," *The Modern Language Journal*, vol. 94, no. 1, pp. 115-130, 2010.