Journal of English Language Teaching and Applied Linguistics
ISSN: 2707-756X
DOI: 10.32996/jeltal
Journal Homepage: www.al-kindipublisher.com/index.php/jeltal

JELTAL
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

Student Perceptions of Plickers as a Formative Assessment Tool in Language Learning

Ahmed Al-Kindi[1] ✉ Younis Al-Belushi[2] and Hisham Al-Belushi[3]
[123]University of Technology and Applied Sciences, Suhar, Sultanate of Oman
Corresponding Author: Ahmed Al-Kindi, **E-mail**: ahmed.a.alkindi@utas.edu.om

| ABSTRACT
The integration of technology in education has revolutionized traditional teaching and learning methods, providing innovative tools to enhance student engagement and learning outcomes. This study explores the perceptions of foundation-year language students at the University of Technology and Applied Sciences-Suhar (UTAS-Suhar) regarding the use of Plickers as a formative assessment tool. Grounded in the frameworks of the Technology Acceptance Model (TAM) and Constructivism, the research investigates students' perceptions of Plickers across four dimensions: ease of use, interactivity, usefulness, and immediate personalized feedback. Findings reveal generally positive responses, with interactivity receiving the highest mean score, followed by immediate feedback, usefulness, and ease of use. The results underscore the potential of Plickers to foster an interactive, engaging, and feedback-rich learning environment in language education. The study concludes with recommendations for future research to explore the long-term effects of Plickers on language learning outcomes and its adaptability across diverse educational contexts.

| KEYWORDS
Plickers, Formative Assessment, Technology Acceptance Model (TAM), Constructivism, Language Learning

| ARTICLE INFORMATION
ACCEPTED: 15 July 2025 **PUBLISHED:** 28 August 2025 **DOI:** 10.32996/jeltal.2025.7.3.27

1. Introduction
In recent years, the integration of technology in education has become increasingly prevalent, offering innovative ways to enhance the learning experience. Educational technologies, particularly formative assessment tools, have reshaped classrooms into more dynamic and engaging spaces by enabling real-time feedback and fostering active learning (Black & Wiliam, 1998). Among these tools, Plickers—a simple, cost-effective technology—has garnered attention for its ability to create interactive and personalized learning environments while requiring minimal infrastructure (Beck, 2019). This research explores the perceptions of language students at the University of Technology and Applied Sciences (UTAS) in Suhar regarding the use of Plickers as a formative assessment tool to augment language learning.

2. Background
Language learning is a complex and dynamic process that benefits from interactive and engaging methodologies (Richards, 2015). Traditional assessment methods often fail to provide the immediate and personalized feedback crucial for effective learning (Hattie & Timperley, 2007). Technology-driven solutions such as Plickers address these challenges by offering real-time insights into student understanding and promoting collaborative learning (Chaiyo & Nokham, 2017; Rashid & Asghar, 2016).

The adoption of tools like Plickers has been linked to improvements in classroom interactivity, with studies highlighting their ability to support differentiated instruction and increase student participation (Beck, 2019; Wang, 2015). Rooted in the frameworks of the Technology Acceptance Model (TAM) and Constructivism, this study evaluates the extent to which Plickers enhances the learning experiences of UTAS-Suhar students by fostering engagement, interactivity, and personalized feedback.

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model, developed by Davis (1989), posits that user acceptance of technology is influenced by perceived ease of use and perceived usefulness. Within educational contexts, TAM has been instrumental in examining how students adopt technology in their learning environments (Teo, 2011). Studies suggest that tools like Plickers are more readily embraced when students find them user-friendly and believe they enhance learning outcomes (Rafique et al., 2020).

In language education, the application of TAM provides valuable insights into how students perceive the benefits of integrating tools like Plickers into their academic activities. Research by García-Martín and Cantón-Mayo (2019) emphasizes that both ease of use and usefulness significantly influence student motivation and engagement with educational technologies, thereby supporting the adoption of Plickers as a classroom tool.

2.2 Constructivism

Constructivism, a learning theory advanced by Piaget (1972) and Vygotsky (1978), underscores the active role of learners in constructing knowledge through collaboration and interaction. In language learning, constructivist approaches highlight the importance of fostering critical thinking and active engagement with materials (Doolittle, 1999).

Plickers aligns well with constructivist principles by promoting interactivity and providing immediate feedback, allowing students to reflect on their progress and make meaningful connections to course material (Revere & Kovach, 2011). Research suggests that such tools empower learners to take ownership of their learning process, thereby enhancing motivation and engagement (Blasco-Arcas et al., 2013).

3. Literature Review

The intersection of technology and education has transformed traditional teaching methodologies, particularly with the introduction of formative assessment tools that enhance student engagement and understanding. Black and Wiliam (1998) emphasize that formative assessment is essential for fostering learning by providing timely feedback. Tools like Plickers address this need by enabling interactive and instantaneous assessment in the classroom.

The integration of technology in language education has gained significant traction in recent decades. Plickers, a technology-driven formative assessment tool, simplifies the process of gathering and analyzing student responses without requiring students to own digital devices (Beck, 2019). Its user-friendly design has been shown to increase student motivation and participation in various studies. For example, research by Chaiyo and Nokham (2017) highlights that such tools improve student engagement while reducing teacher workload.

The Technology Acceptance Model (TAM), developed by Davis (1989), provides a theoretical framework to understand users' attitudes toward technology adoption. TAM posits that perceived ease of use and perceived usefulness significantly influence technology acceptance. In the educational context, research by Teo (2011) found that both factors play a critical role in determining whether students and teachers are willing to adopt new tools like Plickers.

Plickers also aligns with constructivist learning theory, which emphasizes active participation and collaborative learning. According to Vygotsky (1978), meaningful learning occurs when students actively engage with content in interactive environments. By promoting immediate feedback and interaction, Plickers fosters a constructivist classroom setting where students can reflect on their learning and improve their understanding in real-time (Revere & Kovach, 2011).

Moreover, literature supports the role of formative assessment tools in enhancing learning outcomes. A meta-analysis by Hattie and Timperley (2007) found that feedback is one of the most powerful influences on student achievement. Plickers provides this feedback instantaneously, helping educators adapt their teaching strategies and address learning gaps promptly (García-Martín & Cantón-Mayo, 2019).

4. Methodology

This study was conducted at the University of Technology and Applied Sciences-Suhar (UTAS Suhar) in the Sultanate of Oman. It invoved level 4 (pre-intermediate to intermediate) foundation students (n = 55) enrolled for general English preparatory course.

The research instrument for this study employed a 5-item Likert scale questionnaire, designed to measure students' perceptions across four crucial dimensions of Plickers use: Easiness, Usefulness, Interactivity, and Provision of Immediate Personalized Feedback. This questionnaire will be distributed to a sample of language students at UTAS-Suhar, and the responses will be analyzed to garner insights into the effectiveness of Plickers as a formative assessment tool in language learning. This

methodological approach aims to provide a nuanced understanding of students' perspectives, contributing valuable information to the discourse on technology integration in language education.

5. Data Analysis

This study investigated student perceptions of the Plickers classroom response system, focusing on ease of use, interactivity,usefulness, and immediate personalized feedback. Data was collected through a survey administered to language learners who had used Plickers in their English language classes. The survey employed a Likert scale (1-5) for statements related to each category. The mean (M) scores for each category are displayed in Table 1.

Category	Mean (Likert Scale 1-5)	± Standard Deviation
Ease of Use	3.2	± 1.17
Interactivity	4.1	± 1.22
Usefulness	3.3	± 1
Immediate Personalized Feedback	3.5	± 1.12
Overall Satisfaction	3.3	± 1.34

TABLE 1: A 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* was used for a group of items exploring student perceptions of

5.1 Ease of Using Plickers

In assessing the easiness of using Plickers, participants were asked to respond to statements regarding the platform's interface, response card usage, and overall integration into language lessons. Although the mean score for ease of use was the lowest among the categories (mean = 3.20, SD = 1.17), the majority of participants agreed (or strongly agreed) with statements indicating that Plickers' interface is easy to understand and use in the language learning classroom. There was a moderate spread in responses, indicating that some users found Plickers easier to use than others. Despite this, positive perception was consistent across various aspects, such as ease of response card utilization, straightforward integration into language lessons, and clear instructions. Figure 1 indicates student responses to the items exploring this category.

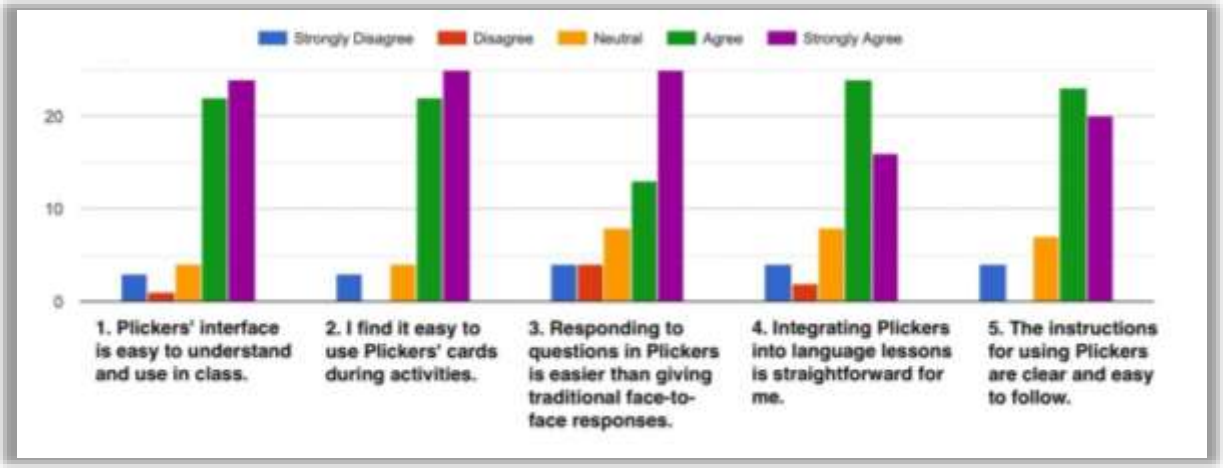

Figure 1: Responses to the Items Exploring Ease of Using Plickers.

5.2 Usefulness of Using Plickers

The mean score for statements related to the usefulness of Plickers was 3.30 (SD = 1.00). This suggests that users find Plickers to be somewhat beneficial for enhancing their language learning experience. Participants expressed positive views regarding the usefulness of Plickers in language learning. A substantial number agreed that Plickers helped identify areas of improvement in language skills, encouraged focus during lectures, and added value to traditional language learning methods. Additionally, respondents noted that Plickers increased their enthusiasm for studying and made learning more motivating (see Figure 2).

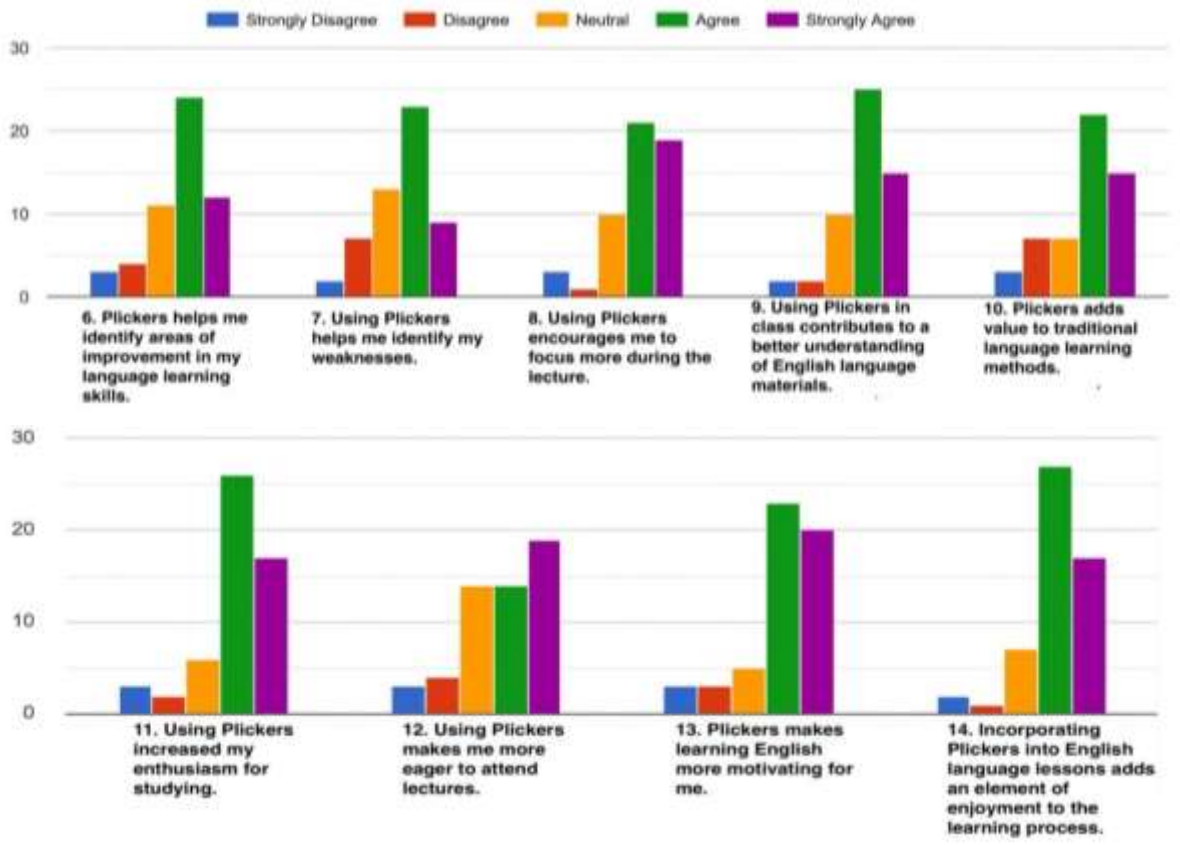

Figure 2: Responses to the Usefulness of Using Plickers.

5.3 Interactivity in Using Plickers

The interactivity aspect of Plickers received favorable feedback from participants. The students reported the highest level of agreement with statements related to interactivity (mean = 4.10, SD = 1.22). The majority agreed that Plickers encouraged active participation in language activities, stimulated critical thinking during lectures, and promoted collaboration and interaction among language students. Participants also acknowledged that the interactive nature of Plickers enhanced their overall learning experience (See Figure 3). This suggests that users perceive Plickers as a tool that fosters active participation and engagement in language learning activities.

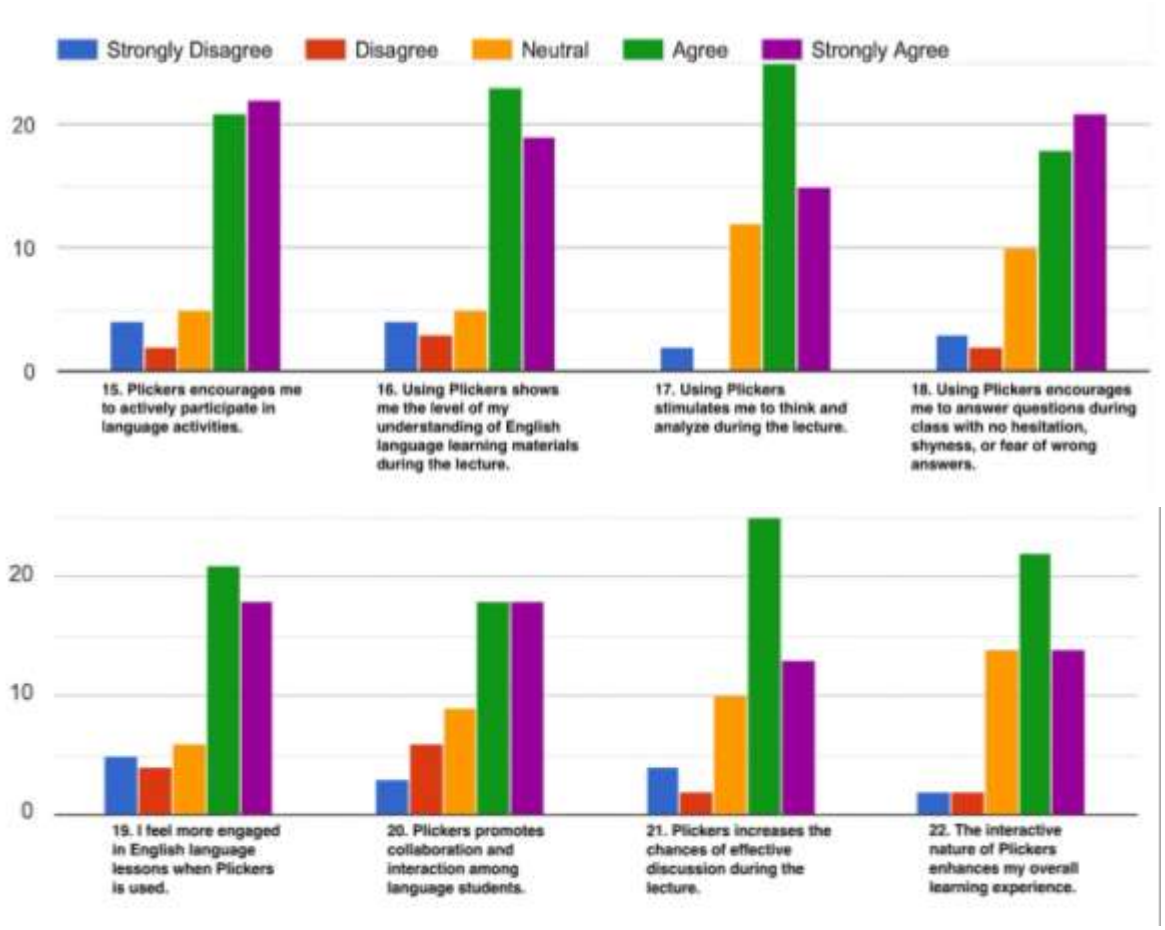

Figure 3: Responses to the Items Exploring Interactivity while Using Plickers.

5.4 Immediate Personalized Feedback in Plickers

Regarding the immediate personalized feedback feature of Plickers, participants conveyed positive sentiments. Responses related to immediate personalized feedback resulted in a mean score of 3.50 (SD = 1.12). This indicates a generally positive perception of the feedback Plickers provides to users. Students appreciated the specificity and usefulness of the feedback provided by Plickers, noting that it helped them grasp language concepts more effectively and motivated active participation in language activities.

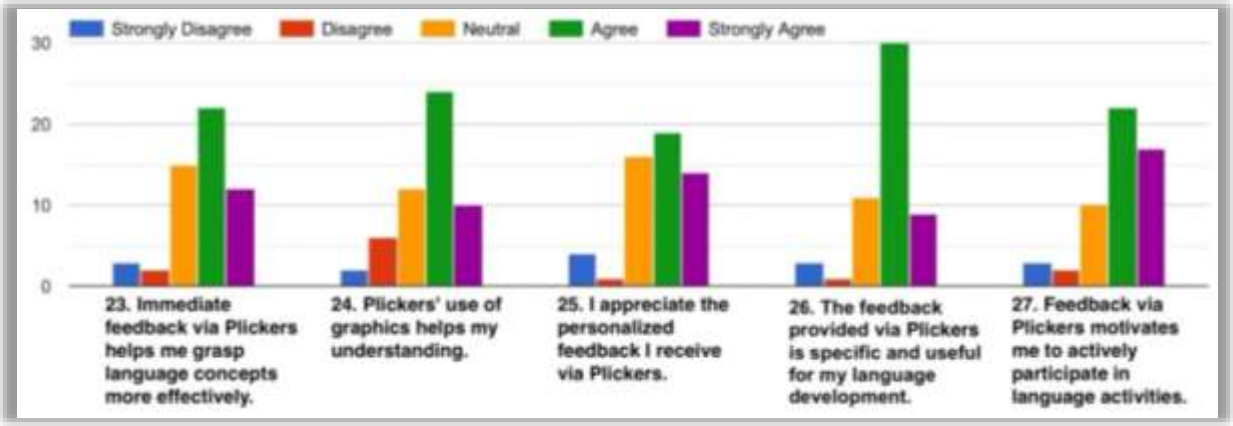

Figure 4: Responses to the Items Exploring Immediate Personalized in Plickers.

5.5 Overall Perception of Using Plickers

The overall perception of using Plickers in language learning was overwhelmingly positive with a mean score of 3.30 (SD = 1.34). A significant majority of participants found Plickers to be a valuable and effective tool for enhancing their language learning experience (see Figure 5).

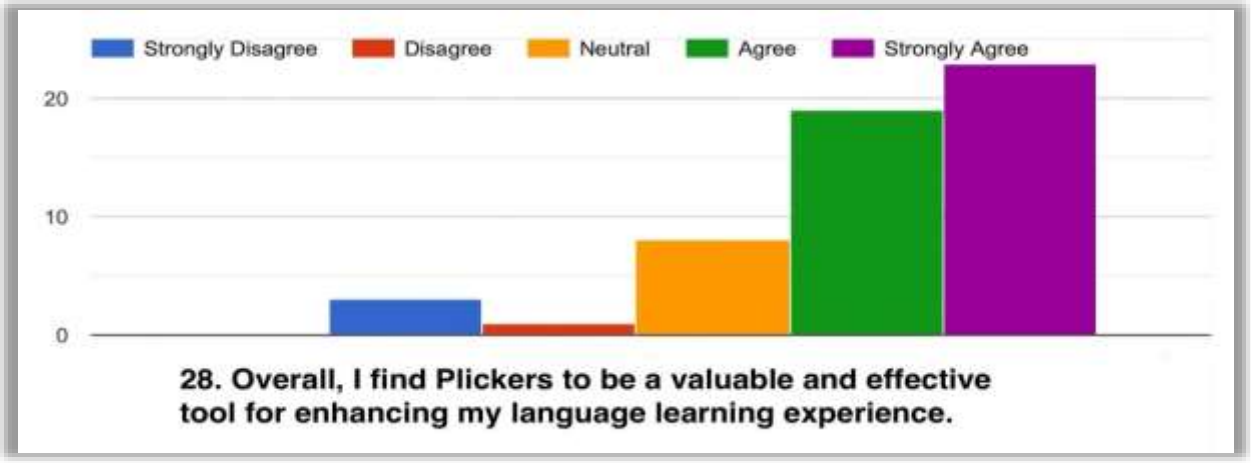

Figure 5: Responses to the Item Asking about the Overall Perception of Using Plickers.

6. Discussion

The positive findings in this study align with previous research indicating that educational technologies, such as Plickers, can positively impact language learning experiences. The agreement among participants regarding the easiness, usefulness, and interactivity of Plickers suggests that the platform has the potential to be a valuable asset in language classrooms.

The gender and foundation year level distribution did not significantly impact the overall positive perception of Plickers. However, it is essential to delve deeper into potential variations in responses based on these demographic factors. Subgroup analyses may reveal nuanced perspectives that could inform tailored implementation strategies.

One notable aspect is the strong agreement among participants that Plickers adds value to traditional language learning methods. This finding underscores the platform's potential to complement existing instructional approaches, fostering a more engaging and enjoyable learning environment.

7. Limitations and Areas for Further Research:

While the findings are encouraging, a few limitations need to be considered. The study relied on self-reported data, and social desirability bias might have influenced responses. Additionally, the sample was limited to foundation year learners, and the generalizability of the findings to other language learning contexts needs to be explored. Future research could involve observational studies to investigate how Plickers use translates into classroom interactions and language learning outcomes. Longitudinal studies could explore the sustained impact of Plickers on language learning motivation and achievement.

In conclusion, this study provides evidence that Plickers is perceived positively by foundation year language learners and may contribute to a more engaging, interactive, and feedback-rich learning environment. Further research is needed to explore the long-term impact of Plickers on language learning outcomes and to understand its effectiveness in different language learning contexts.

8. Conclusion

In conclusion, this study explored the perceptions of language learning students regarding the use of Plickers in the classroom. The overall positive responses indicate that Plickers is well-received, with participants finding it both easy to use and beneficial for their language learning journey.

The study contributes to the growing body of literature on the integration of educational technology in language education. Educators and administrators may consider the positive feedback from students when contemplating the adoption of Plickers or similar tools. However, it is crucial to recognize that individual differences in learning preferences and experiences may influence perceptions, and ongoing research is needed to explore these nuances further.

Future research could delve into specific pedagogical strategies for integrating Plickers into language lessons, considering diverse learning styles and preferences. Additionally, investigating the long-term impact of Plickers on language proficiency and student engagement would provide valuable insights into the sustained effectiveness of this educational technology.

Funding: This study received no external funding.

Conflicts of interest: The authors declare no conflict of interest.

Publisher's note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

[1] Beck, T. (2019). Plickers in the classroom: Simple technology for active learning. *Journal of Educational Technology Systems, 47*(3), 373–389.
[2] Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice, 5*(1), 7-74.
[3] Blasco-Arcas, L., Buil, I., Hernández-Ortega, B., & Sese, F. J. (2013). Using clickers in class: The role of interactivity, active collaborative learning, and engagement in learning performance. *Computers & Education, 62*, 102-110.
[4] Chaiyo, Y., & Nokham, R. (2017). The effect of Kahoot, Quizizz, and Plickers on students' perception in the classroom response system. *International Conference on Digital Arts, Media, and Technology (ICDAMT)*, 178-182.
[5] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.
[6] Doolittle, P. E. (1999). Constructivism and online education. *Journal of Online Learning and Teaching, 6*(2), 72-76.
[7] García-Martín, J., & Cantón-Mayo, I. (2019). The use of technologies as a tool for learning and assessment in higher education. *Education Sciences, 9*(1), 51.
[8] Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81-112.
[9] Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development, 15*, 1–12. doi:10.1159/000271225
[10] Rafique, H., Almagrabi, A., Shamim, A., Anwar, F., & Bashir, A. (2020). Investigating the Acceptance of Mobile Library Applications with an Extended Technology Acceptance Model (TAM). *Computers & Education*. 145. 103732. 10.1016/j.compedu.2019.103732.
[11] Rashid, T., & Asghar, H. M. (2016). Technology use, self-directed learning, and student engagement in higher education. *Computers in Human Behavior, 63*, 604-612.
[12] Revere, L., & Kovach, J. V. (2011). Online technologies for engaged learning: A meaningful synthesis for educators. *The Quarterly Review of Distance Education, 12*(2), 113-124.
[13] Richards, J. C. (2015). *Key issues in language teaching*. Cambridge: Cambridge University Press.
[14] Teo, T. (2011). Factors influencing teachers' intention to use technology: Model development and test. *Computers & Education, 57*(4), 2432-2440.
[15] Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
[16] Wang, A. I. (2015). The wear-out effect of a game-based student response system. *Computers & Education, 82*, 217-227.