

## Effectiveness of Interactive Digital Applications: Assessment of Student Engagement

Sophia Bello

*University of Toronto*

The question of what constitutes tangible student participation in higher education is considerably challenged by the larger class sizes, and presently, by the transition to dual delivery or online learning models of teaching. As educators, we are called to inspire and promote a learning environment that fully engages critical thinking and values student engagement. Finding an innovative method to teach a large linguistics course is challenging, but certainly achievable. When teaching in-person, a paper and pen suffices to draw morphological or syntactic tree structures or to write and submit discussion questions, research papers, and abstracts. This type of activity provides students with an opportunity to exchange thoughts, notes and feedback with simplicity. In an online environment, the relationship between technology and pedagogy is understandably newer and the boundaries must be clearly defined. We often shy away from technology either due to lack of knowledge, fear of causing student anxiety or simply because it is too time consuming. Presently, we are called to bridge the gap between the two and follow the three principles of Universal Design for Learning (UDL) when designing and delivering course content: engagement, representation, and action and expression (Center for Applied Special Technology, n.d.). Across disciplines, it is imperative to consider the diversity of our student body, to improve accessibility, to increase accommodation needs, and to provide flexible and multimodal approaches to learning (Ontario Human Rights Commission, 2018).

Equally relevant to this framework is the need to promote student engagement and maintain open teacher-student communication (O'Hair & Wright, 1990; Barkley, 2010). Research examining the effectiveness of digital tools as a pedagogical measure for online student engagement in higher education is quickly emerging (Gaytan & McEwen, 2007; Dixson, 2010, 2015; Lederman, 2018). This, however, requires a full range of digital tools that can systematically provide the best pedagogical development for both language and linguistic-based courses. Three questions must be answered: (1) How do we promote student engagement and generate student participation in an online environment? (2) What specific tools and/or applications can help us generate reports that quantify student knowledge? (3) How do we measure the success and effectiveness of these said tools in a linguistics course?

This presentation delivers a preliminary overview of the effectiveness of two separate digital applications: *Kahoot!* and *Canvas Student*. *Canvas Student* provides a secure network to test student knowledge via (un)timed assessments and offers a user-friendly interface for classroom discussions, critical thinking submissions, and peer reviews. *Kahoot!*, on the other hand, is a multidisciplinary learning platform that engages students through various visual cues (DOGA Inclusive Design, n.d.). Practical for formative and summative assessments, this cost effective real-time feedback application is extremely interactive, produces reports summarizing student progress, and most importantly, has been shown to minimize student anxiety (cf. Wang & Tahir, 2020). For academic purposes, each tool was used on a weekly basis to promote student interaction and engagement, to record student participation, and to encourage attentiveness and information retention in a third year linguistics course. To ensure their effectiveness, credibility, and inclusion of student voice, multiple surveys were administered (Peregrina-Kretz, 2019). The general consensus was to increase the use of these applications for knowledge check-ins and for maintaining a classroom community, especially in an online environment.

We highlight the effectiveness of using two specific digital applications, among others, as evident through student feedback. We conclude by providing educators with an understanding and appreciation for the fusion of technology and pedagogy to best student learning.

## References

- Barkley, E. (2010). *Student engagement techniques: A handbook for college faculty*. San Francisco, Ca: Jossey-Bass.
- Center for Applied Special Technology (n.d.). Retrieved from <https://www.cast.org/impact/universal-design-for-learning-udl>
- Dixson, M. D. (2010). Creating Effective Student Engagement in Online Courses: What Do Students Find Engaging? *Journal of the Scholarship of Teaching and Learning*, 10(2), 1-13.
- Dixson, M. D. (2015). Measuring Student Engagement in the Online Course: The Online Student Engagement Scale (OSE). *Online Learning Consortium*, 19(4). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1079585.pdf>
- DOGA Inclusive Design (n.d.). *Learning and Playing with Kahoot!* Retrieved from <https://doga.no/en/tools/inclusive-design/cases/learning-and-play-with-kahoot/>
- Gaytan, J. & McEwen, B. (2007). Effective Online Instructional and Assessment Strategies. *American Journal of Distance Education*, 21(3), 117-132.
- Lederman, D. (2018). Conflicted Views of Technology: A Survey of Faculty Attitudes. Retrieved from <https://www.insidehighered.com/news/survey/conflicted-views-technology-survey-faculty-attitudes>
- O'Hair, M. J. & Wright, R. (1990). Application of Communication Strategies in Alleviating Teacher Stress. In D. O'Hair & G.L. Kreps (eds). *Applied Communication Theory and Research* (pp. 141-162), New York: Routledge.
- Ontario Human Rights Commission (2018). *Policy on accessible education for students with disabilities*. Retrieved from <http://www.ohrc.on.ca/en/policy-accessible-education-students-disabilities#Appendix%20A>
- Peregrina-Kretz, D. (2019). We Hear You: Incorporating Student Voices into our Work. Retrieved from <https://supportingstudentsuccess.wordpress.com/2019/03/28/we-hear-you-incorporating-student-voices-into-our-work/>
- Wang, A. I. & Tahir, R. (2020). The effect of using Kahoot! for learning – A literature review. *Computers & Education*, 149. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0360131520300208>