What Matters: Culturally and Ecologically Responsive Designs

Q & A

- For Jia, could you give an example of a crutch vs. seamlessly integrated?

  Jia: The differences between the two lies in instructional pedagogical approach whether is well aligned with major factors that influence multilingual learners' motivation and learning outcomes, such as their existing language skills and current learning needs and particular their access to technology tools, technology skills and their preferred ways of using new technologies. I have observed in many situations a top-down approach to the technology integration which served as a crutch. Even if its instructional design was superb in its original context, it became infeasible and awkward within other teaching and learning contexts. On the contrary, a bottom-up approach to instructional design has a better chance for a seamless technology integration, as it takes local factors into consideration and is more sensitive to an individual's learning condition.

  For example, in one of our intervention studies, my team noticed that many diverse English (former) learner undergraduates were struggling with their assigned readings in an EAP (English for academic purpose) course due to limited academic vocabulary knowledge, and these ELLs all have a mobile phone and used text messaging for social interactions frequently. We developed and implemented an intervention to support their reading comprehension, providing them with repeated comprehensible exposures to high utility academic words and difficult words using texting. The intervention used a small amount of time, and coordinating the texting content and time with their instructor's lesson plan and their routine. It provided students with timely support to meet their urgent needs. The students' reported a positive learning experience, and expressed their desire to continue with the project. We also measured more learning gain compared with the students in the control group. You may find more information for this sample in our articles published in *Computers & Education*, *Language Learning and Technology* and *Computer-Assisted Language Learning*.

- How do we facilitate teacher learning on technology and its implementation and application in our language classrooms and curriculum?

  Jia: I thought one of the most effective ways could be developing a cluster of technological, pedagogical incubators in classroom, at school and the ministry and school district levels, by involving interested teachers and students to pioneer some projects. Then successful projects can serve as a springboard (not templates or modules) to explain what important

and localized factors are involved in the critical process of instructional design and implementation using new technology as well as showcase how to resolve problems that may rise.

But first, it is important to nurture a culture of proactively talking about using technology for language teaching and learning among teachers and with students. In the midst of conversations, we also should reassure teachers that they can make meaningful contribution to the technology integration in language classroom, even if they are not the first, informed by the present advance of technology, and sometimes, our students may know more about new technology. With knowledge in how language acquisition occurs, teachers can pinpoint the critical components in language instruction using technology and ask critical questions when collaborating with colleagues and students in technology integration for teaching and learning language skills.

A series of workshops on critical AI literacy can be provided for teacher professional development, given the AI capacity of generating significant amount of mixed, including hallucinated information that can place a negative impact on students' learning experience.

- Is there any type of clearinghouse where AI lesson plans are posted?

  Jia: I was not able to locate specific language lesson plans using AI. The following two websites provide some useful ideas learning and teaching language skills using AI.
  The WAC Clearinghouse:
  https://wac.colostate.edu/repository/collections/textgened/ai-literacy/
  AI pedagogy project by metaLab (at) Harvard: https://aipedagogy.org/guide/starter/

- Could you please share the name and link of the article? Thank you!

  Jia: Here are two article links:

  1. Marek ŁUKASIK (2023). Corpus linguistics and generative AI tools in term extraction: a case of Kashubian – a low-resource language. *Applied Linguistics Papers*, 27(4), 34–45.
  2. Tony Berber Sardinha (2024). AI-generated vs human-authored texts: A multidimensional comparison. *Applied Corpus Linguistics, 4*(1) https://doi.org/10.1016/j.acorp.2023.100083

- I am teaching online and I think students are more engaged when they get personalized learning. Do you think that onsite learning is missing this engagement due to the trend to rely on technology?

  Jia: Yes, my observation agrees with yours. Students are much more engaged when they can relate learning activities to their personal interest and immediate goals than ones that they cannot make personal connections. With diverse technology apps, I found that online teaching has great capacity and flexibility to tailor our instruction to individual student

needs and interests. I have taught diverse online courses for the past 12 years at undergraduate and graduate levels and found one strategy is to give students assignments that not only are structured to meet the curriculum goals but also allows them to focus on the content and skills in line with their interest (in my case, related to their academic and professional aspirations).

- How much have you learned or do you focus on the benefits of using AI to help with executive functioning challenges, like task engagement and organization, which also affect language teaching and learning?

  Jia: This is an interesting research topic. My research using (AI-powered) mind map to support students' academic writing focused on developing students' executive functioning skills, such as pre-writing planning and organization of their essay as well as peer feedback (communication for tasks and social interactions) during online writing collaboration. Our preliminary results with a small sample of graduate students observed an enhanced engagement on writing tasks, and the clarity of writing organization between paragraphs, including presenting evidence aligned with thesis arguments. However, this exploratory study did not include a control group. More research is required in the area, as well as in other areas, for example, how generative AI can impact students' writer identity development and expression of original and critical ideas.