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Digital Language Learning and SLA

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Li and Lan (2021) admirably broached a timely topic in second language learning: the role of technological mediation in learning and instruction. In particular, the authors sought to make a case for Digital Language Learning as a domain of research and practice in its own right. Their professed goal is ambitious:

> Here we outline the approach of digital language learning (DLL) for L2 acquisition and representation, and provide a theoretical synthesis and analytical framework regarding DLL's current and future promises.

The authors argue:

> Theoretically, the DLL approach serves as the basis for understanding differences between child language and adult L2 learning, and the effects of learning context and learner characteristics. Practically, findings from learner behaviors, cognitive and affective processing, and brain correlates can inform DLL-based language pedagogies. Because of its highly interdisciplinary nature, DLL can serve as an approach to integrate cognitive, social, affective, and neural dimensions of L2 learning with new and emerging technologies including VR, AI, and big data analytics.

To what extent the authors accomplished their goal and succeeded in advancing their case theoretically and practically is best left for individual readers to find on their own; but here, I would like to take up four issues.

First is whether it is true that "our theories and practices for the learning and teaching of second languages (L2) have lagged behind the pace of scientific advances and technological innovations".

For me, the reverse seems truer. The field of study, second language acquisition (SLA), has been around for almost five decades, the field of foreign language teaching for centuries. Both have long predated technology, in spite of the breathtaking pace of development of the latter. The fact is that our knowledge of second language learning and teaching stems much more from the academic study of second language acquisition and from pedagogical practice than from recent "scientific advances and technological innovations". Indeed, of the multiple fields of study cited in the Li and Lan article, there is a glaring void – the near absence of SLA research, especially the literature on instructed second language acquisition (ISLA), a thriving and productive domain of study spanning more than three decades and yielding a wealth of relevant insights into learning and intervention (see, e.g., Han & Nassaji, 2019; Norris & Ortega, 2000; Loewen, 2014; Loewen & Sato, 2017). The point here is not to suggest that DLL cannot or should not constitute an independent domain of inquiry, but to suggest the need to avoid much reinventing of the wheel when there is a relevant, available body of research to tap into, build on, and expand.

Relatedly, a second issue concerns the authors' frequent reference to "traditional teaching", "traditional learning methods", "traditional classroom-based, translation-based, teacher-centered L2 learning", "traditional teacher-student interactions", "traditional approaches", "traditional L2 learning", "traditional methods", "traditional classrooms", "traditional L2 instruction" and the like, pitting DLL against them, treating traditional practices monolithically, and allowing a rather dated understanding of second language instruction to pervade. Even a cursory inspection of the ISLA literature suffices to indicate that the field has, for the most part, long ceased practicing "traditional classroom-based, translation-based, teacher-centered L2 learning". Therefore, arguing the strengths of DLL over traditional teaching is neither convincing nor compelling. A more productive way of exploring the potential of DLL would be to make connections with current pedagogical practices, which, for the most part, are functionally oriented. The structural-to-functional shift debuted in the late 1960s and has since undergone substantive revision and refinement, with task-supported and task-based language teaching representing the state-of-the art – informed by an SLA-based understanding of learning as a socio-cognitive constructive process and of the need for differentiated instruction, catering to individual differences.

Relatedly, third, depicting Zoom teaching categorically, as follows, is inaccurate and biased.

> Today's pandemic-induced online learning mode (e.g., through *Zoom* or *Microsoft Teams*) often lacks joint attention, contingent response, and reciprocal interaction between the students and the instructor. Sustained attention to the subject matter is difficult to maintain in such a setting.

The fact is that Zoom teaching is not necessarily devoid of social interaction, nor without "contingent response, joint attention, or reciprocal interaction between the students and the instructor". Like any technology-mediated language teaching and learning, Zoom is only a mediating tool, to be wielded by a mediator, the instructor and (to some extent) the learner. Compared to GBLL, MALL, VR, and so on, Zoom arguably excels in allowing direct 'human intervention', thereby enabling human-human interaction, albeit at a distance. When it comes to social interaction, a theme Li and Lan expounded in their article, there is no substitute for human-human connection precisely on levels the authors defended: the social, the cognitive, the affective, and the neural. These connections are, at best, limited, rigid, and incomplete in human-machine interaction.

Fourth, the authors' argument, via the social L2 learning hypothesis (Li & Jeong, 2020), is that L2 acquisition should replicate the conditions surrounding L1 acquisition, but this is only partly supported by SLA research – insofar as current understanding of L2 acquisition favors a usage-based approach, semantic bootstrapping, and incidental learning. However, as decades of SLA research have amply reasoned and documented, L2 acquisition is fundamentally different from L1 acquisition (see, e.g., Bley-Vroman, 1989; Clahsen & Felser, 2006; N. Ellis, 2006; R. Ellis, 1985; Hulstijn, 2015; Schachter, 1996; Selinker, 1972; Sorace, 2005). Instruction should, therefore, be designed and implemented so as to mitigate gaps between L1 and L2 learners (see, e.g., N. Ellis, 2008; Long, 2007).

In closing, the potential of DLL, which Li and Lan (2021) set out to explore, looms large and real. Its realization rests on intimate collaboration between technology designers and second language acquisition professionals. It is at that interface where creative, innovative, and robust tools for language learning shall emerge, thereafter to be validated by theoretical and empirical research from multi-disciplinary perspectives.

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