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The larger picture of engaged learning

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Aimee. Over here, Jiayi!… Hi. Sorry I missed our appointment last time. But my second week of virtual reality language learning is starting in 20 minutes –

Jiayi. We gotta talk about that! I just chose that topic for my college keystone project. My lab read this paper, from like 10 years ago – Li & Lan, 2021. The head dude – he's the author, from Hong Kong – says it's good to reflect on how far we've come. Ok, so…. As a ninth grader starting your second foreign language, why did you pick the VR option and what do you like about it so far?

A. Play video games for an hour and no tests!

J. Funny. There are tests. Remember near the end of each hour the characters had a long, complex dialogue, and then you had to make some choices –?

A. Oh yeah. Since it was just speaking, it was easy.

J. You're always being evaluated. Next time – Ding! – the game was adjusted. Ok, for this interview – students drop out of the video game option all the time. I want you to know about the real life games. They call it content and language integrated learning.

A. I did that in middle school. An hour playing soccer, all in Spanish. The coach – well, instructor – was from Columbia. Not even one word of English. If you had an urgent question you could use automated translator, with a penalty.

J. Makes sense. Ok, do you get stretch breaks?

A. Halfway through and we have to explain our strategies and what is going on, speak in the group, in Mandarin. Same with the soccer class, tons of discussion. Pretend to be a famous player and prepare to give interviews to the press. Once a week, same as now, we had video chat with native Spanish speakers, any topic ok. But if you liked your buddy, you could connect as much as you wanted outside of school, as long as the AI confirmed the convo was half English, half their language.

J. The other options. I see from this list that your school offers four world languages, Mandarin, Spanish, Hindi-Urdu and Arabic. For Mandarin – ha ha, it's kind of a cliché, but it's martial arts class. Neat.

A. Also cooking and culture, for Mandarin. You still get video buddies, watch Chinese-made movies. But – tests. Those face-to-face learning options do actual grammar tests.

J. The advantage of CLIL – more human time, less screen time, and authentic learning experiences.

A. More talking to real people.

J. Researchers are developing new semester-long modules. Learning your foreign language during a veterinary medicine class, or music studio, or video design. Students can go intern in real restaurants in China Town or be a helper for Cafe St. Petersburg.

A. Hey, my friend is doing that – but not part of a school, through her family. Russian Gourmet Foods – the staff are all in their 70s, it's like the Soviet Union; if you do something wrong, you get these straight-faced "one-liners" that make no sense.

J. But you get to eat the food!

A. Speaking of options. One kid told me he was in a regular class with a teacher, learning grammar and vocabulary. They still had video chat buddies though. I was surprised, because, I thought those classroom methods didn't work. Like those memes: I studied Spanish for 4 years and all I got was this T-shirt.

J. Well, like polyglots, that's some people's strength, they enjoy systemizing the language. Just can't make everyone do that.

A. Anyways – this whole topic is your keystone? Gimme a sentence, for fun.

J. Ha ha, ok. Wait. Ok, here, from Li and Lan, 2021: "Without such reciprocal and contingent interactions, here will be no role for social interaction to play in learning." I'm skeptical. Immigrant kids who said they learned English from TV…

A. They learned from peers and refined that foundation during TV.

J. Anyways, my angle is more like this: "Gamifying content and language integrated learning with serious videogames." VR needs to be intensely gamified with authentic experiences to fuel interest and support learning.

A. Is that controversial?

J. Example, Luan, Geczy, Lai, Gobert, Yang, Ogata, Baltes, Guerra, Li and Tsai (2020) – the strength of digital learning is precision education – taking into consideration the individual differences of learners in their learning environments, along with their learning strategies.

A. Like the computer tutor, 'Miranda' in *The Diamond Age*. Nell, age 4 onward, had an AI who imprinted on her –

J. – and built educational experiences tailored to her age and environment, in a zone-of-proximal development way. Exactly.

A. But oddly, in Stephenson's imagined world, humans were always part of the teaching process –the human "ractors" ("interactive actors") who acted out the stories.

J. I liked the potential for incidental learning in pursuit of puzzles and games. Remember Nell in middle childhood, exploring a maze that had her literally embodying 2-bit computation.

A. You pointed the book at something, it was a microscope –

J. Because – forget educators and take the kid's view. The main problem with classroom learning is boredom. Like any emotion, boredom helps prioritize action. Boredom is your signal to cease the current activity, because your brain says that activity has a low probability of leading to a soon-enough reward. VR up-ends all that by creating environments that are inherently interesting to explore and master.

A. If you're not interested, you're not learning.

J. Yep. Education researchers are like BaBa in *China Men* when he was the young village teacher; his genuine confusion when the village boys preferred their pranks to gathering at his knee to hear described the parallelisms between the weather, the humors and palace architecture.

A. What about – dating apps to learn a foreign language.

J. Yep. Japan has had those for 20 years.

A. Learning to drive a car in a foreign language! Recalculando!

J. The game I'm developing is Prison Escape. You're wrongly imprisoned overseas and have to learn the guards' language to get basic things and converse with other prisoners.

A. Oops – time! One more question – What's it like – in your lab – Half women? My teacher said the scientific and business worlds are half women now, even at the top.

J. Ha ha. Still a future utopia. But coming.

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