Alchemy, Innovation, and Learning in 2025

Prediction is very difficult, especially if it is about the future.
—Niels Bohr

Let us put our minds together and see what life we can make for our children.
—Sitting Bull

Dawn breaks on a gorgeous morning in summer 2025. Peter has been waiting for this for months. It’s New Student Orientation Day at My University, Peter’s customized version of four formerly separate independent colleges that functionally merged several years earlier. He readies himself quickly and by 8:30 a.m. carefully opens the box he recently received from Student Life. He takes out the virtual reality (VR) visor, adjusts it, and touches the switch. Instantly, he is on campus, being welcomed by Perpetua, his personal orientation leader. VR has made it possible for each student to have a fully individualized campus that is populated with other students (also in VR mode) who may be physically located anywhere but whose lived experience is in the VR university. Perpetua escorts Peter to the session, where she introduces him to several other students. All of them will get to know each other well, as they all will be enrolled in the same set of courses and will participate in many other activities together. Peter’s small group joins other students for the program. Several skits and presentations that cover the usual topics for new student orientation provide virtual interactive roles for new students to play. After the orientation session, Peter and his friends are told to check their Per Student Life. He takes out the virtual reality session, where she introduces him to several other students. All of them will get to know each other well, as they all will be enrolled in the same set of courses and will participate in many other activities together. Peter’s small group joins other students for the program. Several skits and presentations that cover the usual topics for new student orientation provide virtual interactive roles for new students to play. After the orientation session, Peter and his friends are told to check their Per Student Life. He takes out the virtual reality.
To me, the most important “2025 gold” that will be created from the “2017 base elements” is the use of technology to create fully immersive learning environments. This will entail moving from a still largely passive online learning environment in 2017 (i.e., students log in, watch captured videos, write notes, take quizzes and exams, upload papers, participate in threaded and generally asynchronous discussions) to an environment in which student-faculty and student-student interaction occurs for all students at any time due to the AI-based platforms underlying the learning environment. Each student has his/her personal teaching assistant to provide coaching and intervention, along with other support functions. Joint projects are completed in immersive simulated labs that provide true sensory feedback (again, think flight or surgical simulators). Neuroscience research and centuries of pedagogical explorations clearly indicate that interactive methods in general, and those that add the body back into the process whenever appropriate, result in better learning.

At present we remain constrained, even trapped, by the need to stay close to traditional approaches. Intellectually, we understand the need to bend the innovation curve that implements cognitive neuroscience and related research to a nearly vertical climb, but we are nervous about doing so based on the pointed and determined resistance from accreditors, evaluation systems, and/or internal constituencies. Collectively, our behavior is at times reminiscent of toddlers who want to head off on their own and explore but who stop every so many feet and turn to check in with an adult to make sure that things are still okay. It takes us a while to get comfortable heading off into the greater unknown, even when we know we must.

The sooner we let imagination become, as the Walt Disney Company would put it, imagineering, the better off we will be. Immersive learning will surpass active learning, which in its day surpassed passive learning in effectiveness. Campus leaders should support bold, visionary efforts at creating new learning models. Imagineered innovation will not always work perfectly, and sometimes it will not work at all. Niels Bohr’s point about prediction is well taken. But vastly improved student learning is at stake. Using our base elements of today, we can make gold and improve the lives of our children by 2025. That would make Sitting Bull proud.

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