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People, Partnerships and Pedagogies

Learning design principles that cultivate future-oriented students

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The use of technology-enhanced learning in higher education has increased significantly. While this has led to greater flexibility in delivery and enhanced engagement with students (), it has also placed additional demands on already time-poor educators. Despite the potential benefits, many educators struggle to engage with learning design in a meaningful way, leading to suboptimal student experiences. Despite the prevalence of technology, students are being made to engage with outdated learning strategies and content. This poster shares learning design strategies for time-poor educators to enact in online learning environments to support future-oriented thinking skills of students.

Stack and Bound (2021) see future-orientedness as the ability for students to “face future unknowns and new challenges beyond the immediate course/training. The emphasis is on the ability to resolve unfamiliar or non-standard problems. To be able to do this, future-orientedness involves many of what are variously called 21st century skills, or the new ‘top 10 skills’, such as critical thinking, creativity, learning to learn”. Dondi et al. (2021) identified 56 essential skills they think all citizens will need in the future world of work. We will focus on the skills outlined in the cognitive category: critical thinking and mental flexibility.

Abrami et al. (2014) in their study outlined two instructional interventions that foster critical thinking skills; the opportunity for dialogue and exposing students to authentic or situated problems particularly when applying problem solving and role-playing methods. Li et al. (2022) in their paper concluded the following: connecting students with resources and facilitating interaction, technology significantly impacts the fluency and flexibility dimensions of creativity. Flexible learning time, cumulative learning processes, and problem-based activities promote the ongoing development of creative behaviours, enhancing fluency, originality, and elaboration in different dimensions of creativity.

We will use the 4 domains of the Technology Enhanced Learning Accreditation Standards (TELAS) (2023) framework to outline future-oriented learning design strategies taken from our experience in supporting learning and teaching:

Online learning environment

- Using interactive elements, such as H5P (an open-source JavaScript content collaboration framework), provides multiple perspectives on single issues in an engaging way. Multiple viewpoints for a complex situation or case study can help students evaluate and compare perspectives and provides exposure to multiple points of view.

Learner support

- Providing content in multiple modes and with compelling ‘teacher talk’ to explain what content is there, how they should engage with the content they’re provided and why.
- Explicitly calling out transferrable skills and capabilities covered in a subject or assessment.

Learning and assessment tasks

- Authentic assessments, especially project briefs provided by industry, give students a chance to respond to authentic, complex, and integrated assessments relevant to their future profession. Providing wicked problems help students to be familiar with and confident in ambiguous settings and encourages lateral thinking.

Learning resources

- Use of techniques such as Socratic and open-ended questioning to have students research some of their own learning. You don't have to provide all of the answers! It is not about providing all of the knowledge to students, but in supporting their ability to think critically and ask the right questions to find the right information. This future-orientes students to be able to problem solve and critically interrogate new and changing information.

Keywords: Learning design, future-oriented, TELAS Framework, 21st Century Skills

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