Universiteit Leiden
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# Transdisciplinary perspectives on validity: bridging the gap between design and implementation for technology-enhanced learning systems

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# Propositions

accompanying the dissertation

## Transdisciplinary Perspectives on Validity: Bridging the Gap Between Design and Implementation for Technology-Enhanced Learning Systems

1. Traditional systematic reviews based on database searches are slower and more likely to omit relevant papers than reviews combining active learning and snowballing. [Ch. 2]
2. If a technology-enhanced learning solution for a complex topic such as cybersecurity aims to meaningfully impact learners, it must be designed in a way that helps learners understand the relevance and actionability of the topic in their context. [Ch. 3, 4, 5]
3. There exists a problematic hierarchy in the validity criteria for technology-enhanced learning. Statistical validity and effectiveness are considered practically essential, whereas generalisability and rigour are often no more than an afterthought. [Ch. 6, 7]
4. An over-reliance on quantitative methods as our source of evidence for validity criteria may lead to overly optimistic conclusions regarding technology-enhanced learning interventions. [Ch. 6, 7]

5. When trying to motivate learners to invest time and resources in a topic they have little interest in, fostering a trusting relationship with the learner by promoting feelings of relatedness is more effective than emphasising the importance of the topic.
6. The field of technology-enhanced learning would benefit from more researchers and practitioners using qualitative methods to gain a contextualised understanding of criteria such as fairness, trustworthiness, and meaningfulness.
7. If our validation strategies are misguided, our innovations will follow this misguided path. We must investigate where our validation strategies are heading astray, such that we can correct our course.
8. The future of technology-enhanced learning will be bright if relevant research fields and societal partners manage to effectively collaborate in transdisciplinary projects.

9. The average duration of a PhD trajectory would reduce significantly if PhDs received dedicated time to work on personal development in team settings with their peers.
10. The future of AI in education lies in getting students to better understand themselves, not in getting AI to better understand students. We are educating people, not parrots.
11. We can overcome most of academia's challenges by adhering to a simple principle: stop thinking less of yourself and start thinking of yourself less.

Max Anton Nicolaas van Haastrecht,

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