Alternative Assessment Methods for Interdisciplinary Learning:

Synoptic Impact Mapping as Reflexive Learning Practice

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Abstract

Within the context of Industry 4.0[1] and the concurrent formulation and emergence of *Education 4.0*, alternative approaches to assessment are needed to capture the dynamic complexity of interdisciplinary learning and its artefacts. This presentation will examine Synoptic Impact Mapping as one such assessment methodology for reflexive interdisciplinary learning, or *meta-praxis.*

Meta-praxis, a reflexive interdisciplinary pedagogy designed by the author, provides a framework within which to develop *holistic intelligence* (Ravenscroft, Richards and Bunce, 2020)[2], integrating disciplinary and transdisciplinary competences to develop and leverage *meta-skills* through *meta-learning,* as defined by Bialik and Fadel (2018)[3].

The Synoptic Impact Mapping Project[4] is developing an alternative assessment model and interactive tool to map learning impact and growth in *meta-praxial* or reflexive interdisciplinary learning contexts, foregrounding continuous peer and self-assessment.

This integrative model compares levels of *agency*[5] with levels of *transfer*[6] to establish a profile of both *planned* and *emergent* impact and growth at multiple levels: for a school, curriculum, project, lesson, teacher or learner, for example.

It also maps the balance of emphasis on the **content** (data, information, knowledge, model of understanding, concept), **context** (topic, subject, discipline, learning area, space, environment, behaviour, macro context (socio-cultural, political, historical etc.), or **mode** (learning process, tool of interpretation, mode of inquiry, cognitive or practical skill – way of *knowing* or *doing*).

The underlying principle of the project is that mapping *meta-praxial* learning impact and growth is an open, dynamic, and non-hierarchical process, based on a balance of emphasis relative to context and the individual, over time. Multiple instances of impact maps at all levels, represent change processes and growth across multiple domains, for individuals, groups and organisations.

This model is being used to mentor students in mapping their growth and to facilitate self-mapping of complex capabilities, to form part of a reflexive narrative of the learning journey, within the MetaPraxis Project in South Australia[7], and in the Sound and Music courses at UEL.

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[1] Shwab, K. (2016). The Fourth Industrial Revolution, Penguin Random House

[2] Ravenscroft, A., Richards, P., Bunce, M. (2020) *Education 4.0: Is characterising and harmonising intelligences and cultivating mindfulness and positive mental health a way of thinking about a Pedagogy 4.0 for Higher Education*. Chapter for "Learning and Work", by Sage (Eds) Malloch, M., Evans. K,. Cairns, L. & O' Connor, B.

[3] Fadel, C. (2015) Four-Dimensional Education: *The Competencies Learners Need to Succeed. Center for Curriculum Redesign*

[4] https://www.metapraxisproject.org/impact-mapping.html

[5] Leadbeater, C (2017), Student Agency: Learning to Make a Difference. CSE: Melbourne.

[6] Bialik , M & Fadel, C. (2018) *Knowledge for the Age of Artificial Intelligence: What should Students Learn?* Center for Curriculum Redesign. https://curriculumredesign.org/wp-content/uploads/CCR_Knowledge_FINAL_January_2018.pdf, (Accessed 16/8/2020)

[7] https://www.metapraxisproject.org