ASCILITE 2024

Navigating the Terrain:

Emerging Frontiers in Learning Spaces, Pedagogies, and Technologies

Qualitative curriculum mapping of technological skills: Insights from a case study

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Most programs in higher education promise to develop some sort of technology or information literacy in their students (Oliver & Jorre de St Jorre, 2018). This may include the ability to use specialised tools in their field or to think critically about the use and development of modern technologies. However, it is not always clear how these skills are actually developed within study units or subjects (Bone & Ross, 2021; Oliver & Jorre de St Jorre, 2018), which are often offered as separate modules within a program.

On the other hand, curriculum mapping has become a popular method for tracking skill development throughout educational programs. However, mapping can sometimes result in box-ticking exercises (Bone & Ross, 2021; Spencer et al., 2012), focusing on whether skills are present or absent in different subjects, based on the description of learning outcomes and the topics covered across individual subjects.

Approaching curriculum mapping as a qualitative inquiry (Spencer et al., 2012) can help bridge the gap between formal descriptions of learning outcomes at the program and subject level, and the actual learning activities that students engage in. By following a progressive model of curriculum design (Knight, 2001), a qualitative perspective on curriculum mapping aims to identify skills development beyond their mere presence or absence. Instead, it seeks to explore how students are introduced to these skills, the range of opportunities they have to practice them at different levels of complexity, and how different activities connect to one another. Additionally, by combining multiple sources of information such as document and artifact analysis, interviews, and more, the mapping process can help uncovering barriers and enablers for curriculum reform that may not be apparent through simple box-ticking exercises.

This poster will present an excerpt of a qualitative curriculum mapping project, focusing on how specialised data analysis tools are taught in two biology majors. It will highlight the challenges of fully integrating these tools across subjects to provide students with progressive opportunities for practice. Based on this specific case, this poster will provide examples of the type of information that can be collected and the kind of questions that can be addressed through a qualitative curriculum mapping process, depending on the particular needs of each program and the technological skills to be incorporated.

Keywords: Curriculum mapping, qualitative inquiry, technological skills, progressive curriculum design.

References

Bone, E. K., & Ross, P. M. (2021). Rational curriculum processes: revising learning outcomes is essential yet insufficient for a twenty-first century science curriculum. *Studies in Higher Education, 46*(2), 394-405. https://doi.org/10.1080/03075079.2019.1637845

Knight, P. T. (2001). Complexity and Curriculum: A process approach to curriculum-making. *Teaching in Higher Education, 6*(3), 369-381. https://doi.org/10.1080/13562510120061223

Oliver, B., & Jorre de St Jorre, T. (2018). Graduate attributes for 2020 and beyond: recommendations for Australian higher education providers. *Higher Education Research & Development, 37*(4), 821-836. https://doi.org/10.1080/07294360.2018.1446415

Spencer, D., Riddle, M., & Knewstubb, B. (2012). Curriculum mapping to embed graduate capabilities. *Higher Education Research & Development, 31*(2), 217-231. https://doi.org/10.1080/07294360.2011.554387

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Fischer, J. (2024). Qualitative curriculum mapping of technological skills: Insights from a case study. In Cochrane, T., Narayan, V., Bone, E., Deneen, C., Saligari, M., Tregloan, K., Vanderburg, R. (Eds.), *Navigating the Terrain: Emerging frontiers in learning spaces, pedagogies, and technologies*. Proceedings ASCILITE 2024. Melbourne (pp. 59-60). https://doi.org/10.14742/apubs.2024.1390