

WEAVING WEBS: CREATING INSTRUCTIONAL INTERDEPENDENCY IN BLENDED, ACTIVE LEARNING ENVIRONMENTS

Gwendolyn Lawrie, Jeanette Stok

Presenting Author: Gwendolyn Lawrie (g.lawrie@uq.edu.au)
School of Chemistry & Molecular Biosciences, The University of Queensland, St Lucia Queensland 4069, Australia

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BACKGROUND

Engaging students in independent active-learning within blended learning environments requires a careful integration of instructional scaffolding strategies. These include using multiple modalities of representations, provision of formative feedback and explicit connections between concepts. It is difficult to monitor and

AIMS

Instructional scaffolding was strategically applied to guide students between online and face-to-face learning environments. The aim was to engage students in deeper thinking regarding their chemistry conceptions.

DESCRIPTION OF INTERVENTION

As part of a new institutional blended learning strategy, a large first year, first semester chemistry course has been transformed into a hybrid format. Online learning modules were designed for the EdX Edge platform to engage students in lecture preparation, connecting to in-class activities and complemented by a sequence of online assessment tasks (digital whiteboard and group-based critical discourse).

DESIGN AND METHODS

Evaluation of student learning outcomes in different learning environments across a semester is challenging. In this study, several data sources have been integrated to gain insights into the effectiveness of the scaffolding. Student engagement and their submissions within several dimensions of the course have been analysed for 148 consenting participants (UQ ethics approval).

RESULTS

Students were grouped according to their navigation of the different elements of the course. Patterns in behavior in response to the different forms of scaffolding were observed that align with previous findings. Students became increasingly strategic in their completion of digital assessment tasks at the expense of engaging in deeper conceptual thinking.

CONCLUSIONS

It is important to provide students with flexibility in their approaches to learning however students transitioning from high school require additional scaffolding in how to navigate available resources.

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