FEEDBACK OR FEEDFORWARD: SUPPORTING STUDENTS WITH ALTERNATE OR MISSING CONCEPTIONS IN CHEMISTRY AS THEY TRANSITION INTO TERTIARY CHEMISTRY

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ABSTRACT

Constructivist learning environments are most effective when the learner and teacher are both aware of the existing conceptual models that learners possess to enable them to extend and apply their understanding rather than resort to rote learning (Taber, 2001). As students transition into, and engage in, the new tertiary learning environment it is important to assist them to maximise the effectiveness of their learning which requires measurement or diagnosis of their existing conceptual understanding. One of the challenges in teaching chemistry is to encourage students to recognise their existing knowledge and conceptual understanding and then apply it in new learning situations (Schraw, Crippen, & Hartley, 2006).

Feedback is particularly important for first-year students because they are coming to terms with the change of environment, expectations, teaching approaches and forms of assessment. In this context, Hattie and Timperley's three questions (Hattie & Timerley, 2007) are particularly relevant: "Where am I going?", "How am I going?" and "Where to next?" Formative assessment is critical to "How am I going?" and the feedback is just as valuable for the instructor as for the students to support student learning.
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