

Fostering student engagement and critical thinking with learning analytics

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Increasingly higher education institutions are exploring the potential of learning analytics. These learning analytics enable automated feedback to students through dashboards, reports, or alerts. An underlying assumption is that students will know how to interpret these reports. However, students have rarely been exposed to learning analytics reports and may be unable to use these reports to self-regulate their learning and improve academic performance. Even where learning analytics is correctly interpreted, students may not have the critical thinking skills/metacognitive strategies required to usefully act on the feedback to enhance learning. This project explored a framework for students on how to interpret and act upon learning analytics feedback. The guiding framework is Dwyer et al.'s (2014) integrated critical thinking framework for the 21st century, which sets out analysis, evaluation, and inference as three stages of critical thinking requiring reflective judgement. An exploratory qualitative study was conducted to understand the processes that students use to analyse, evaluate, and make inferences about their own learning from learning analytics reports. Semi-structured interviews were conducted (N=19). Participants were interviewed on their current experiences of critical thinking and feedback, they were then showed five types of learning analytic feedback that students may receive to explore their interpretations of this feedback. Four key themes emerged from thematic analysis of transcripts: 'Context is Essential: What do these numbers mean?', 'Help or Hindrance: Making reports useful', 'Seeking Assistance: I'll ask my lecturer', and 'Utility of the learning analytics report: Making comparisons with my peers'. Our findings reiterate the importance of including students as co-creators in learning analytics designs and programs to ensure that learning analytics is both sustainable and sufficiently used by students.