**Cluster: Optimising digital technologies for learning**

**Cluster Readings at a Glance**

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| **Title** |
|
| Ebner, M., Kinshuk, Wohlhart, D., Taraghi, B., & Kumar, V. (2015). Learning analytics. *Journal of Universal Computer Science, 21*(1), 1-6. Retrieved from: <http://www.jucs.org/jucs_21_1/learning_analytics/abstract.html>  |
| Henderson, M., Selwyn, N., Finger, G., & Aston, R. (2015). Students' everyday engagement with digital technology in university: Exploring patterns of use and 'usefulness'. *Journal of Higher Education Policy and Management, 37*(3), 308-319. doi:10.1080/1360080X.2015.1034424 |
| Keppell, M., Suddaby, G., & Hard, N. (2015). Assuring best practice in technology-enhanced learning environments. *Research in Learning Technology, 23*(1), 1-13. doi:10.3402/rlt.v23.25728  |
| Selwyn, N. (2016). Digital downsides: Exploring university students’ negative engagements with digital technology. *Teaching in Higher Education, 21*(8), 1006-1021. doi: 10.1080/13562517.2016.1213229 |
| Siemens, G. (2013). Learning analytics: The emergence of a discipline. *American Behavioral Scientist, 57*(10), 1380-1400. doi:10.1177/0002764213498851 |

Learning analytics

**Citation**

Ebner, M., Kinshuk, Wohlhart, D., Taraghi, B., & Kumar, V. (2015). Learning analytics. *Journal of Universal Computer Science, 21*(1), 1-6. Retrieved from: <http://www.jucs.org/jucs_21_1/learning_analytics/abstract.html>

**GU Link**

<http://www.jucs.org/jucs_21_1/learning_analytics/abstract.html>

**Key terms and phrases**

learning analytics; student learning and engagement; e-learning, assessment; feedback

**Abstract**

##### Excerpt from Special Issue on Learning Analytics: With the advent of new technologies such as eye-tracking, activities monitoring, video analysis, content analysis, sentiment analysis and interaction analysis, the world of learning analytics has emerged as a vast research area with strong potential in various forms of formal, informal and non-formal learning opportunities. This special issue focuses on these research dimensions and aims to foster discussion on both individual impacts of these dimensions and their interdependencies.

##### Points for consideration

In this special issue on Learning Analytics, the editors have included eight distinct peer-reviewed papers on research in Learning Analytics. The topics covered include assessment, learning, feedback, student self-awareness and more. This issue is a must for anyone looking to improve student learning and engagement whilst optimising their use digital technology.

Students’ everyday engagement with digital technology in university: Exploring patterns of use and ‘usefulness’

**Citation**

Henderson, M., Selwyn, N., Finger, G., & Aston, R. (2015). Students' everyday engagement with digital technology in university: Exploring patterns of use and 'usefulness'. *Journal of Higher Education Policy and Management, 37*(3), 308-319. doi:10.1080/1360080X.2015.1034424

**GU Link**

<http://www-tandfonline-com.libraryproxy.griffith.edu.au/doi/abs/10.1080/1360080X.2015.1034424>

**Key terms and phrases**

digital technology; internet; students; technology-enabled learning; university; usefulness, technology for learning

**Abstract**

The much-discussed potential of ‘technology-enhanced learning’ is not always apparent in the day-to-day use of digital technology throughout higher education. Against this background, the present paper considers the digital devices and resources that students engage most frequently with during their university studies, what these technologies are being used for, and perceptions of ‘usefulness’ attached to these uses. The paper draws upon data gathered from a survey of undergraduate students (n = 1658) from two Australian universities. Having explored a variety of factors shaping student engagement with digital technology within these university settings, the paper considers how ongoing discussions about digital technology and higher education might better balance enthusiasms for the ‘state of the art’ (i.e. what we know might be achieved through technology-enabled learning) with an acknowledgement of the ‘state of the actual’ (i.e. the realities of technology use within contemporary university contexts).

**Points for consideration**

This paper reports on how students use technology in terms of type, perceived usefulness, engagement and practice. The authors also investigate whether subject discipline, age and stage, gender, cultural and linguistic diversity, etc. influence technology use. In reading this paper:

* Look at Tables 2 & 3 (p. 312), how can students’ use of technology assist you to optimise technology for learning in your course?
* Look at Table 4 (p. 315), how can students’ perceptions of the usefulness of technology be used in the design, and evaluation of a teaching session; check student progress; assist with collaboration and communication?

Assuring best practice in technology-enhanced learning environments

**Citation**

Keppell, M., Suddaby, G., & Hard, N. (2015). Assuring best practice in technology-enhanced learning environments. *Research in Learning Technology, 23*(1), 1-13. doi:10.3402/rlt.v23.25728

**GU Link**

<https://search-proquest-com.libraryproxy.griffith.edu.au/docview/1671014228?pq-origsite=summon&https://search.proquest.com/central>

**Key terms and phrases**

##### Technology-enhanced learning; educational strategies; best practices; learner engagement; technology; learning and teaching; higher education; best practice

**Abstract**

##### This paper documents the development and findings of the Good Practice Report on Technology-Enhanced Learning and Teaching funded by the Australian Learning and Teaching Council (ALTC). Developing the Good Practice Report required a meta-analysis of 33 ALTC learning and teaching projects relating to technology funded between 2006 and 2010. This report forms one of 12 completed Good Practice Reports on a range of different topics commissioned by the ALTC and Australian Government Office for Learning and Teaching (OLT). The reports aim to reduce issues relating to dissemination that projects face within the sector by providing educators with an efficient and accessible way of engaging with and filtering through the resources and experiences of numerous learning and teaching projects funded by the ALTC and OLT. The Technology-Enhanced Learning and Teaching Report highlights examples of good practice and provides outcomes and recommendations based on the meta-analysis of the relevant learning and teaching projects. However, in order to ensure the value of these reports is realised, educators need to engage with the reports and integrate the information and findings into their practice. The paper concludes by detailing how educational networks can be utilised to support dissemination.

##### Points for consideration

After examining approaches and pedagogies in 33 ALTC TEL projects, the authors outline and summarise ten best practice outcomes for implementing TEL in teaching. The paper also highlights the importance of defining TEL for engagement. Anyone looking to broaden their perspective on TEL, as well as connect with best practice examples from the wider higher education community will find this paper worthwhile reading.

When reading this article consider:

* Reflect on the 10 best practice outcomes described by the authors (p. 4). Which of these reflect current practice in your course?
* The paper also highlights the importance of defining TEL for engagement. How do you define TEL for student engagement and learning?

Digital downsides: Exploring university students’ negative engagement with digital technology

**Citation**

Selwyn, N. (2016). Digital downsides: Exploring university students’ negative engagements with digital technology. *Teaching in Higher Education, 21*(8), 1006-1021. doi: 10.1080/13562517.2016.1213229

**GU Link**

<http://www-tandfonline-com.libraryproxy.griffith.edu.au/doi/abs/10.1080/13562517.2016.1213229>

**Key terms and phrases**

students; digital; technology; student experience; technology for learning

**Abstract**

Digital technologies are now an integral feature of university study. As such, academic research has tended to concentrate on the potential of digital technologies to support, extend and even ‘enhance’ student learning. This paper, in contrast, explores the rather more messy realities of students’ engagements with digital technology. In particular, it focuses on the aspects of digital technology use that students see as notably unhelpful. Drawing on a survey of 1658 undergraduate students from two Australian universities, the paper highlights four distinct types of digital ‘downside’. These range from low-level annoyances and interruptions, to ways in which digital technologies are seen to diminish students’ scholarship and study. Against this background, the paper considers how discussions of digital technology might better balance enthusiasms for what we know might be achieved through technology-enabled learning, with the often unsatisfactory realities of students’ encounters with digital technology.

**Points for consideration**

In this article the author explores university students’ negative engagement with digital technology. The cited reasons for digital technology being unhelpful were: 1. *Distraction*, 2. *Disruptions*, 3. *Difficulty* and 4. *Detriment*. Before reading this article, consider the research questions posed by the author with respect to your students’ engagement with technology:

* What forms of technology use are seen by undergraduate students as unhelpful, and why?
* What meanings and wider connotations are associated with these perceived ‘downsides’?
* Is there an increased sensitivity or vulnerability to these forms of technological ‘failure’ amongst particular groups of students?

Learning analytics: The emergence of a discipline

**Citation**

Siemens, G. (2013). Learning analytics: The emergence of a discipline. *American Behavioral Scientist, 57*(10), 1380-1400. doi:10.1177/0002764213498851

**GU Link**

<http://journals.sagepub.com.libraryproxy.griffith.edu.au/doi/full/10.1177/0002764213498851>

**Key terms and phrases**

learning analytics; models; distributed learning; technology; student learning and engagement

**Abstract**

##### Recently, learning analytics (LA) has drawn the attention of academics, researchers, and administrators. This interest is motivated by the need to better understand teaching, learning, “intelligent content,” and personalization and adaptation. While still in the early stages of research and implementation, several organizations (Society for Learning Analytics Research and the International Educational Data Mining Society) have formed to foster a research community around the role of data analytics in education. This article considers the research fields that have contributed technologies and methodologies to the development of learning analytics, analytics models, the importance of increasing analytics capabilities in organizations, and models for deploying analytics in educational settings. The challenges facing LA as a field are also reviewed, particularly regarding the need to increase the scope of data capture so that the complexity of the learning process can be more accurately reflected in analysis. Privacy and data ownership will become increasingly important for all participants in analytics projects. The current legal system is immature in relation to privacy and ethics concerns in analytics. The article concludes by arguing that LA has sufficiently developed, through conferences, journals, summer institutes, and research labs, to be considered an emerging research field.

##### Points for consideration

In this paper the author discusses several areas of learning analytics (LA) including research fields, technology, challenges, privacy and data ownership. This paper offers a good overall view of LA and addresses key issues facing academics and institutions in higher education. This informative and reflective piece is suitable for beginner or seasoned users of LA.

When reading this article consider:

* What is your definition of Learning Analytics in higher education?
* What types of digital models and data do you use to explore the effectiveness of your course on student learning and engagement?
* How can Learning Analytics be used to personalise learning for individual students in your course?