ACODE 70 Workshop Program and Presentation Information (Including suggested pre-reading)

*Thursday 17th March 2016 from 9am – 5pm in **Building 1002 Room 211***

Theme: "Analytics and Adaptive Learning and Teaching".
*Note: Please see the presentation details and **suggested pre-reading** below following the program.*

Workshop Task
Explore some of the key elements of an institutional strategy to ensure that learning analytics contribute directly to adaptation in learning and teaching design, delivery or the learning environment.

The proposed key elements of such a Strategy to be explored in this Workshop are:
- *01. Formats and approaches to providing learning analytics*
- *02. Professional development*
- *03. Engaging stakeholders*
- *04. Learning and teaching design, delivery and the learning environment*

Possible other key elements:
- *Ethical issues*
- *Risk mitigation mechanisms*
- *Policies*
- *Governance*
- *Audiences (including students) and Purposes*

Workshop **Building 1002 Room 211**
8.30am   Tea, coffee and registration
9.00am - 9.20am   Welcome to Country & Introduction from VC
9.20am - 10.20am Participants are divided into groups for the day, and will use the following Google docs to document personal observations as well as the work of their group: Group A: http://tinyurl.com/acode70groupa (facilitator - Simon Welsh) Room 1002-203 Group B: http://tinyurl.com/acode70groupb (facilitator - Lucy Webster) Room 1002-204 Group C: http://tinyurl.com/acode70groupc (facilitator - Cathy Gunn) Room 1002-205 Group D: http://tinyurl.com/acode70groupd (facilitator - Garry Allan) Room 1002-209 Group E: http://tinyurl.com/acode70groupe (facilitator - Deborah West) Room 1002-210 Group F: http://tinyurl.com/acode70groupf (facilitator - Sheila McCarthy) Room 1002-213 Contribute to your group's document with your **personal observations during presentations**, and then again during the group work. Nothing prohibits a group from having a look at what others are doing though! *Note: presentations below would normally be 15 minutes long, including 3 minutes Q&A* - *Assoc Prof Michael Sankey, USQ - The three tiered approach to learning analytics for teachers* - *Dr Linda Corrin, University of Melbourne - Completing the Loop: A tool to return meaningful learning analytics data to teachers* Activity 1 (20 minutes + 10 minutes for Group A to share back) Please add some points under element 01 "Formats and approaches to providing learning analytics" in the Strategy, and specifically address the following areas: ● approaches to providing and visualising learning analytics data ● map out which systems your Uni has, or would like to have, providing data to 1) your central dashboard 2) to your LMS, 3) to your central support services, and 4) any other destinations ● prioritise a range of measures that you may look to have implemented at your institution
10.20am - 10.45am   Morning Tea

10.45-12.00
- *Sheila McCarthy, Griffith Uni - Informing Academic Development via Analytics: A Griffith Story*
- *Dr Garry Allan, RMIT - Initiating a culture of learning analytics literacy*
- *Assoc Prof Cathy Gunn, Auckland Uni - Using scenarios to promote learning analytics practice for teachers*

Activity 2 (20 minutes + 10 minutes for Group B to share back)

Please add some points under element 02 "Professional development" in the Strategy, and specifically address the following areas:
- professional/academic development i.e. initiating a culture of learning analytics literacy supported by emerging resources and networks considering different staff roles
- critique the proposed use of the scenarios as a professional development tool

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12pm - 1pm
- *Assoc Prof Deb West, Charles Darwin Uni - Exploring the connections between SoTL and learning analytics*
- *Dr Danny Liu, Macquarie Uni & Sydney Uni: A tale of two universities - organic growth of learning analytics through bespoke coevolution*

Activity 3 (20 minutes + 10 minutes for Group C to share back)

Please add some points under element 03 "Engaging stakeholders" in the Strategy, and specifically address the following areas:
- Who are your stakeholders?
- What are the needs and interests of the various stakeholders and what hooks may there be
- What may be some challenges/obstacles in engaging your stakeholders

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1pm -1.45pm   Lunch

1.45pm - 2.45pm
- *Dr Lucy Webster, CSU - Are you sure we are seeing the same thing? The use of virtual microscopy, adaptive tutorials and analytics.*
- *Prof Barney Dalgarno, CSU - Learning Analytics isn't new: Ways in which we might build on the long history of adaptive learning systems within contemporary online learning design*

Activity 4 (20 minutes + 10 minutes for Group D to share back)

Please add some points under element 04 "Learning and teaching design, delivery and the learning environment" in the Strategy, and specifically address the following areas:
Strategy:
- The potential applications of adaptive e-learning tools and cross-institution communities of practice
- Consider whether there is a place for AI style approaches within contemporary online learning systems

2.45pm -3.45pm
- *Simon Welsh, CSU - The Many Faces of Learning Analytics: Adaptive Learning and Teaching at Charles Sturt University*
- *Dr Jenny McDonald, University of Otago - Learning analytics to explore teaching and learning discourse*

Activity 5 (20 minutes + 10 minutes for Group E to share back)

Please add some points under element 04 "Learning and teaching design, delivery and the learning environment" in the Strategy, and specifically address the following areas:
- The role of learning analytics in data-informed practice, personalised support and personalised learning
- Learning analytics to explore teaching and learning discourse
- Measures of 'success'

 Please review any of the other headings of the Strategy and conclude the first draft of your Strategy.

3.45pm - 4.15pm	Afternoon Tea
4.15pm - 5.00pm	Group F to share back, followed by open discussion Evaluation of the workshop
5pm - 5.30pm	Optional visit of learning and teaching spaces
5.45pm	Bus pick up
6.30pm	Pre-dinner drinks at Union Bank Restaurant, 84 Byng Street, Orange
7pm	Dinner at Union Bank Restaurant, 84 Byng Street, Orange

Abstracts and Suggested Pre-Reading

Assoc Prof Michael Sankey, USQ - The three tiered approach to learning analytics for teachers
Abstract:

If analytics are to be of any use to our teachers it needs to be 1) accessible, 2) user friendly, and 3) extendable. This presentation will look at how USQ is currently sharing our data across systems. In this case, how RightNow CRM system (AskUSQ) and Moodle (USQ StudyDesk) is being used to monitor student behaviours across courses and to enhance learning support more generally. As part of this we will also look at how this can then be extended by way of the developing USQ Data Warehouse and the use of the Moodle engagement plugin.

Suggested pre-reading:

This document provides an overview of USQ's current state of readiness in relation to learning analytics and will be referred to during the presentation:

Learning Analytics: Current State of play

Please also familiarise yourself with the following concepts:

- *Operational data store*
- *Business intelligence*
- *Educational data mining*

Dr Linda Corrin, University of Melbourne - Completing the Loop: A tool to return meaningful learning analytics data to teachers
Abstract:

The 'Loop' tool is a learning analytics tool developed as part of an OLT-funded project between the University of Melbourne, Macquarie University and the University of South Australia. It is designed to help link data from learning management systems (Blackboard and Moodle) with learning designs to provide meaning visualisations to teachers. In this presentation we will showcase the Loop tool and present the findings of our pilot case studies across the three institutions. As an open source, web-based tool, the Loop will be available for educational institutions to adopt/adapt from mid-2016 onwards.

Suggested pre-reading:

Corrin, L., Kennedy, G., Barba, P.D., Bakharia, A., Lockyer, L., Gasevic, D., Williams, D., Dawson, S., & Copeland, S. (2015). Loop: A learning analytics tool to provide teachers with useful data visualisations. In T. Reiners, B.R. von Konsky, D. Gibson, V. Chang, L. Irving, & K. Clarke (Eds.), Globally connected, digitally enabled. Proceedings ascilite 2015 in Perth (pp.CP:57-CP:61), http://www.2015conference.ascilite.org/wp-content/uploads/2015/11/ascilite-2015-proceedings.pdf

Sheila McCarthy, Griffith Uni - Informing Academic Development via Analytics: A Griffith Story

Abstract:

Griffith University has over the last 4 years used manual processes to extract learning and activity data and is now mid-project to implement a range of Learning Analytics Solutions at the enterprise level. This session will take us through how that data was (and is) used to identify and inform targeted training and Academic development opportunities through collaborative processes with other Academic Group support roles (eg. Blended Learning Advisors).

Dr Garry Allan, RMIT - Initiating a culture of learning analytics literacy

Abstract:

RMIT has commenced a series of analytics developments in learning and teaching. The first steps have focused on:

- enabling staff with the use of analytics tools in the LMS

- establishing a role and supportive processes that provides an analytics basis for central L&T decision-making.

- developing academic analytics reporting within the enterprise BI environment

These developments have shaped a more informed approach to L&T prioritisation, and is leading a culture of an increased use of adaptive processes based on an analytical understanding of the L&T dynamic.

Assoc Prof Cathy Gunn, Auckland Uni - Using scenarios to promote learning analytics practice for teachers

Abstract:

Learning analytics is currently broadly defined to cover a range of activities, including: triggers for preventative action when students are identified as 'at risk'; monitoring the development of disciplinary knowledge; and the production of data logs from learner activities to close a feedback loop for teachers. Four New Zealand tertiary institutions are analyzing case studies of emergent uses of learning analytics data, and considering using them to develop scenarios to promote learning analytics practice among teachers. Institutional factors that impact on access to, and use of learning analytics data in the case study contexts are discussed.

Suggested pre-reading:

Gunn, C., J. McDonald, C. Donald, J. Milne, M. Nichols and E. Heinrich (2015). A Practitioner's Guide to Learning Analytics. Proceedings Ascilite: Globally Connected, Digitally Enabled, pp 672-675 http://www.2015conference.ascilite.org/wp-content/uploads/2015/11/ascilite-2015-proceedings.pdf

Assoc Prof Deb West, Charles Darwin Uni - Exploring the connections between SoTL and learning analytics

Abstract:

The scholarship of learning and teaching essentially advocates for a research approach to be applied to the improvement of learning and teaching. It encourages teachers to reflect in a scholarly way on their teaching practice and at the more advanced level to undertake research on teaching practice and curriculum. Learning analytics has the potential to provide data on elements of the teaching process which have to date been difficult to measure particularly for the broader cohort of teachers. This presentation will draw attention to the connection between SoTL and learning analytics and prompt participants to think about how learning analytics can be used in a wider context to contribute to changes in teaching design and practice.

Dr Danny Liu, Macquarie Uni & Sydney Uni: A tale of two universities - organic growth of learning analytics through bespoke coevolution
Abstract:

Despite calls for actionable information, few learning analytics approaches nationally allow staff to easily 'do' anything with data. Coupled with the typically long development cycles of software tools, this has the potential to stall uptake of learning analytics by interested staff. This presentation will outline two approaches at the University of Sydney and Macquarie University where staff were closely involved in the coevolution and development of two bespoke learning analytics tools to personalise student-staff interactions at scale. This allowed the tools to meet pressing needs, and has led to substantial organic adoption and positive student outcomes. These highlight the importance of grassroots developments for building wider learning analytics capabilities.

Suggested pre-reading:

An enhanced learning analytics plugin for Moodle: student engagement and personalised intervention
https://www.academia.edu/19123100/An_enhanced_learning_analytics_plugin_for_Moodle_student_engagement_and_personalised_intervention

A personalized and cross-institutional approach to connect students with staff through customizable analytics
https://www.academia.edu/19586429/A_personalized_and_cross-institutional_approach_to_connect_students_with_staff_through_customizable_analytics

Prof Barney Dalgarno, CSU - Learning Analytics isn't new: Ways in which we might build on the long history of adaptive learning systems within contemporary online learning design
Abstract:

Back in the 1980s, long before the term "learning analytics" was coined, researchers developed the first intelligent tutoring systems (ITS) and cognitive tutors (CT), which provided adaptive learning experiences for students based on cognitive models of the learning process within specific learning domains. More recently, algorithms emerging from the solid body of research and practice in ITSs have been used to provide dynamic pedagogical and metacognitive guidance within the context of contemporary online learning systems. This presentation will

provide a plain English overview of the system architectures and algorithms that have been developed as part of this research along with suggestions about ways in which developers of contemporary adaptive learning systems might build on this earlier work.

Suggested pre-reading:

New Potentials for Data-Driven Intelligent Tutoring System Development and Optimization Authors: Kenneth R. Koedinger, Emma Brunskill, Ryan S.J.d. Baker, Elizabeth A. McLaughlin, and John Stamper
http://www.columbia.edu/~rsb2162/New%20potentials%20for%20ITS-source.pdf

Dr Lucy Webster, CSU - Are you sure we are seeing the same thing? The use of virtual microscopy, adaptive tutorials and analytics.

Abstract:

CSU became a member of the Biomedical Education, Skills & Training (BEST) Network in 2015 (https://www.best.edu.au/). This Network contains 3 elements: 1. Disciplinary Loops - a community of like-minded academics who develop and share educational resources; 2. SLICE - a large image database that academics and students can search, annotate and collaborate on images/virtual slides and; 3. Smart Sparrow adaptive e-learning software. Historically, it has been incredibly difficult to teach microscopy-based disciplines by distance education. Students would have limited access to standard glass slides during very intense (and stressful) residential school periods. The combination of virtual microscopy, adaptive e-learning software and analytics has resulted in significant improvements in the teaching and learning across many disciplines at CSU. This presentation will use case studies from haematology and histopathology demonstrate how this technology and the Smart Sparrow analytics has been used by academics at CSU.

Simon Welsh, CSU - The Many Faces of Learning Analytics: Adaptive Learning and Teaching at Charles Sturt University

Abstract:

At CSU, Adaptive Learning and Teaching is defined as encompassing: a) data-informed practice, b) personalised support and c) personalised learning. This presentation will discuss the roles that Learning Analytics play in each of these three areas, exploring concrete examples in practice today and opportunities/challenges for future development.

Suggested pre-reading:

Welsh, S. & Uys, P. (2015). Dreaming of Electric Sheep: CSU's Vision for Analytics-Driven Adaptive Learning and Teaching. In T. Reiners, B.R. von Konsky, D. Gibson, V. Chang, L. Irving, & K. Clarke (Eds.), Globally connected, digitally enabled. Proceedings ascilite 2015 in Perth (pp. CP:246-CP:251).
http://www.2015conference.ascilite.org/wp-content/uploads/2015/11/ascilite-2015-proceedings.pdf

Dr Jenny McDonald, University of Otago - Learning analytics to explore teaching and learning discourse

Abstract:

Developing knowledge and competence in any discipline involves developing disciplinary literacy. Knowledge in the discipline is both understood and expressed through specific language constructs that differ between experts and novices. Evidence for distinct disciplinary literacies has appeared through both corpus studies and systemic functional linguistic analyses of disciplinary texts. In this session, we share the results from a study of undergraduate health science discourse which exploits features of disciplinary literacy to explore the relationship between teacher discourse and typed student responses to deep questions such as, Please explain how . . ; Please describe why . .; Please apply your understanding of . . . to formulate a response to . . . Our goal in exploring these relationships is to develop and apply automated analytic methods, provide actionable insights for teachers and foster deep learning for students