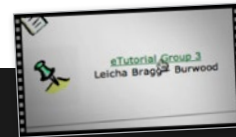


LEARNING TO TEACH ONLINE



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CASE STUDY

Online discussions in maths teacher education

Featuring: Dr Leicha Bragg, Deakin University

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| Context | <ul style="list-style-type: none">- 400 students participating from 3 different campuses in a class for primary maths teachers, <i>'Professional Practice and Mathematics: Designing an Inclusive Program'</i>- Students are in their final year of a Bachelor of Education |
| Description | <ul style="list-style-type: none">- Asynchronous discussions as part of an 8 week fully online class- Students discuss video lectures, activities and have question and answer support |
| Technology | <ul style="list-style-type: none">- Discussion forums within the Blackboard learning management system (LMS) |

Written by Simon McIntyre

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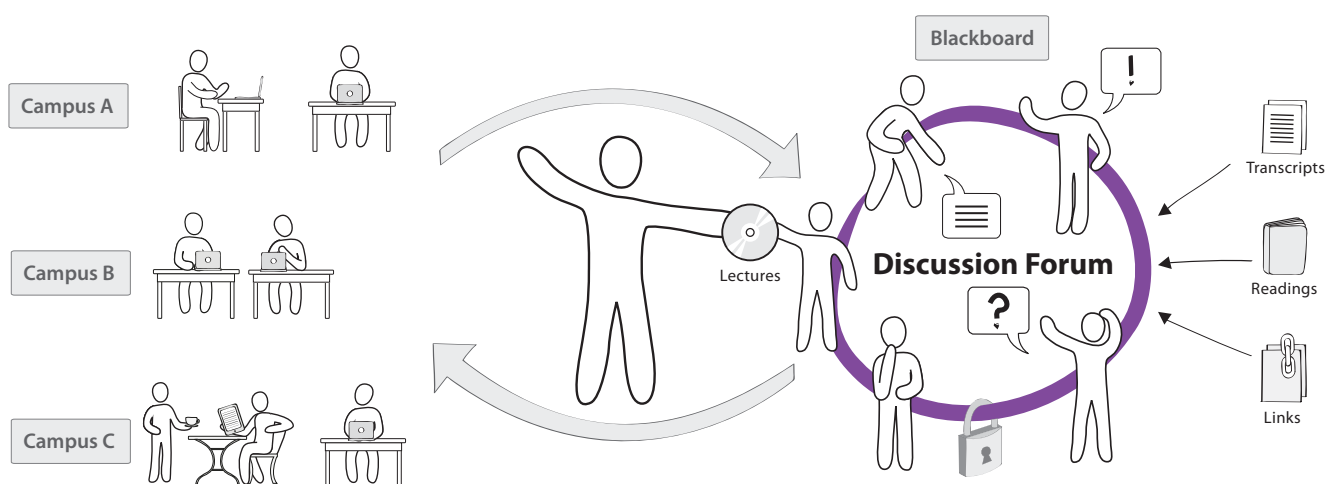
Aims and overview

This case study examines the use of online [asynchronous](#) discussions as part of a large professional practice class for primary mathematics teachers. Online forums within Blackboard are used to host discussions about video lectures, support assessments and to enable students to ask questions and receive advice about content. The realities of managing large scale online discussions are discussed, along with strategies for effective facilitation.

What are asynchronous discussions?

Asynchronous online discussions contain a series of messages left chronologically over a period of time, meaning people can participate without having to all be present at once. Asynchronous discussions are very useful for when participants are dispersed around the world in different time zones, or cannot easily meet online at one time. They work particularly well for class discussions where students study online at different times of the day. Most Learning Management Systems (LMS) such as [Blackboard](#) and [Moodle](#), have in-built discussion forums. Leaving and responding to comments in other [web 2.0](#) technologies such as [blogs](#), [YouTube](#) or [Twitter](#) can also be considered a form of asynchronous discussion.

For more strategies and guidance, and information about [synchronous](#) online discussions, we recommend that you refer to the episodes '[Engaging and motivating students](#)' and '[Conducting effective online discussions](#)'.



In this case study, large numbers of students from three different campuses participate in smaller online tutorial groups within Blackboard. There are discussion areas for each tutorial group, along with larger discussion areas for the entire student cohort. Students are sent large video lectures on CD-ROM, and discuss these online. There are also other supporting class resources such as transcripts, audio [podcasts](#) of the video lectures, readings, links and class administrative information provided.

Case study outcomes quick summary

Key benefits

- *Students became more actively involved in their own learning, and critically engaged with the class content*
- *Some students reported that they were surprised about how much they have learned through active participation in the online discussions*
- *The online discussions allowed students the opportunity and time to reflect upon their own thoughts in the context of their peers' understanding of a topic*
- *Because the online discussions typically spanned a period of two weeks, students had time to refine their own contributions, and also to properly consider the contributions of other students*
- *The flexibility in terms of time of an online discussion meant that students could work effectively around their busy professional practice schedules*
- *Students who are usually quiet or shy in face-to-face classes had the opportunity to contribute equally, also offering the teacher and other students a chance to get to know them better*

Key issues to consider

- *Some students can be intimidated about the idea of publicly posting their thoughts in a discussion. Care needs to be taken particularly in the beginning of a class to build students' confidence by outlining clear expectations and leading by example*
- *Online discussions can become overwhelming if not checked every day, as the number of contributions can increase quickly. Both teachers and students need to develop a habit of spending small amounts of time online regularly, rather than large amounts of time infrequently*

Motivation for adopting an online teaching strategy

Dr Leicha Bragg is a Lecturer within the Faculty of Arts Education at Deakin University, teaching Mathematics Education and ICT. She volunteered to design and coordinate the fully online professional development class for primary school teachers, and has been teaching online for nine years. When the university asked teachers to develop online classes, Leicha accepted the challenge because she was keen to explore more flexible teaching approaches better suited for students undertaking the professional practice component of their degree.

Planning

Leicha stressed that once an understanding of the technology was developed, conducting online discussions was something that even someone new to online teaching could undertake. She offered the following advice about planning online discussions:

- *Speak to colleagues who have conducted online discussions before, and seek the advice of the IT department in your institution to get help with setting up an online environment*
- *Look at the structure of the class and determine where conducting online discussions will contribute something to the students' learning. Ask yourself what purpose do the online discussions serve? How will students benefit from them? How many discussions are required? How long should the discussions run for?*
- *Make sure that any class documentation that will be distributed to the students, such as project briefs and class outlines match the structure and timing with the online class*
- *Ensure that the navigation is clear and easy to follow. Pay attention to clearly identifying what different discussion areas are to be used for, when they close and what assessment is attached to participation in them. Even something as simple as clear names on discussion threads that relate to the assessment or lecture they are discussing can reduce confusion amongst students*
- *Double check that students have the right level of access or permissions within the online environment to be able to access and contribute to the discussions properly. Sometimes small technical errors can disrupt the flow of a conversation and prevent some students from participating.*

Teaching

Some 400 students took part in the online class from three different [Deakin campuses](#) (Burwood, Geelong, and Warrnambool in Victoria Australia). Leicha uses the concept of [social constructivism](#) as the foundation for structuring her online teaching approach. Students are encouraged to share their thoughts, knowledge and experiences with their peers in a safe online environment, constructing their knowledge as a collective. All points of view are valued as a part of the larger discussion of concepts and ideas. Leicha found the following points valuable to her teaching strategy:

- *Since the overall class size was very large, students are broken up into smaller tutorial groups inside Blackboard of around 20-22. Leicha teaches a group herself, and also coordinates three other tutors to provide a sense of parity between the groups*
- *Students participated in an introductory exercise where they introduce themselves and get to know each other before joining in further discussions. This trust building exercise can help to encourage students to contribute more in conversations*
- *Students were given questions at the conclusion of each video lecture they receive. These questions were discussed by each tutorial group in a dedicated [thread](#) in the online discussion board*
- *Students were made aware that contributions to discussions were assessable*
- *Students were instructed on how to engage with a discussion critically, and were helped to develop an understanding of how to disagree with their peers constructively so that a potential conflict can become a positive addition to the discussion*

- Students in each tutorial group had access to a common discussion area, where they could participate in conversations about tasks, ask academic and technical questions, and offer feedback about the class
- In the question threads, student were encouraged to answer each other's queries, saving time and building a sense of collegiality. When students were directed to ask questions about a particular assignment or topic in one place, everyone in the class could benefit from the answers provided
- As similar questions were asked each time the class ran, Leicha collated the answers into a FAQ section of the class outline. The question thread became an effective feedback mechanism about the class

Issues to consider and suggestions for dealing with them

Leicha identified the following problems that can be encountered when conducting online discussions, and suggested some potential solutions:

- **Issue**

Students make poor contributions to a discussion

Suggested strategy

If online learning is new to a student, they may not know what is expected of them. At the start of the class, students were provided with criteria of what constitutes a satisfactory contribution to an online discussion. They were advised that they should respond to other contributions, how to correctly cite external references, discuss the topic in relation to what is currently happening in the field etc.

- **Issue**

Students only contribute to a discussion at 'the last minute'

Suggested strategy

Leicha set time limits on lecture discussions. After 2 weeks of activity, a thread was locked, meaning that students could no longer participate. This proved to be effective in motivating students to contribute early in the discussion, and in keeping the class focused on one topic at a time.

Conclusion

Online discussions can be conducted in a wide range of different online technologies, and can be a good way of getting started in online teaching. They allow individual personalities of students and teachers to be projected into the online environment, and offer opportunities to construct reflective learning strategies. We strongly recommend that you also read the other Learning to Teach Online episodes related to online discussions to help you develop effective strategies you can apply to your own teaching practice.

Additional reading*

De Wever, B., Keer, H. V., Schellens, T., & Valcke, M. (2010). [Roles as a structuring tool in online discussion groups: The differential impact of different roles on social knowledge construction](#). *Computers in Human Behavior*, 26(4), 516-523.

Lave, J., & Wenger, E. (1996). [Situated learning : legitimate peripheral participation](#). Cambridge: Cambridge University Press.

Miltiadou, M., & Savenye, W. C. (2003). [Applying Social Cognitive Constructs of Motivation to Enhance Student Success in Online Distance Education](#). *AACE Journal*, 11(1), 78-95.

Wenger, E., White, N., & Smith, J. (2010). [Learning in Communities](#). In U.-D. Ehlers & D. Schneckenberg (Eds.), *Changing Cultures in Higher Education* (pp. 257-283): Springer Berlin Heidelberg.

**Note: Some readings are held in subscription only databases. In most cases accessing the link from your institution's network will enable access*

Acknowledgements

Interview and Production: *Simon McIntyre and Karin Watson*

Camera and Post: *Creative Development – L&T@UNSW*

Edit: *Sarah Spackman*

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COFA Online would like to extend a special thank you to the institution and academic who graciously donated their time and expertise to this case study.



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To find out more about the Learning to Teach Online project, or to view the video component of this episode, please visit the COFA Online Gateway.

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About the project

The [Learning to Teach Online](#) project is a free professional development resource designed to help teachers from any discipline, whether experienced in online teaching or not, to gain a working understanding of successful online teaching pedagogies that they can apply in their own unique teaching situations. It hopes to encourage dialogue, discussion and the sharing of ideas about online learning and teaching across disciplines and between institutions around the world.

About COFA Online

COFA Online is an academic unit at the College of Fine Arts (COFA), The University of New South Wales (UNSW), Sydney, Australia. It has been innovating online pedagogy, academic professional development and effective online learning strategies since 2003.

About The University of New South Wales

UNSW has an enrolment of approximately 40,000 students, and is the leading international university in Australia with over 10,000 international enrolments from over 130 nations. UNSW was also ranked as the top university in 2009 in the Australian Government Learning and Teaching Performance Fund for the quality of its teaching.

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Support for this activity has been provided by the Australian Learning and Teaching Council Ltd, an initiative of the Australian Government Department of Education, Employment and Workplace Relations. The views expressed in this activity do not necessarily reflect the views of the Australian Learning and Teaching Council.



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