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Teaching Teachers for the Future: Exploring the different interpretations, applications and experiences of TPACK

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Abstract and Symposium Plan

As part of the national Digital Education Revolution (DER) all pre-service teachers need to develop both understanding and competency in embedding information and communication technologies (ICTs) into the content areas through a TPACK framework (Department of Education, 2008). A Government scoping study indicates that the most common forms of ICT currently used in classrooms are PowerPoint and basic Internet searches (Education Services Australia, 2010). These forms of ICT do not make best use of the potential learning possibilities of ICT. This project is aimed at developing the technological pedagogical content knowledge (TPACK) of pre-service teachers via sustainable integration of ICT in pre-service teacher education programs for both primary and secondary teachers.

Each of the speakers will discuss their understanding of TPACK and their areas of research:

Vilma Galstaun will provide a broad overview of curriculum re-design using a TPACK framework at the University of Sydney

Shannon Kennedy-Clark will provide examples of embedding ICT into History and Science units of study across the pre-service teacher degrees and will report on survey findings on pre-service teachers' TPACK.

Lina Markauskaite and Peter Goodyear, Yael Kali, Agnieszka Bachfischer in the paper “Unpacking TPACK: exploring knowledge in eLearning design teams” will discuss some findings from a study of eLearning design teams, in which they applied some key TPACK concepts for researching teams’ collaborative design practices and knowledge. The symposium will commence with a discussion, which will be followed by interactive presentations by each of the speakers and will conclude with a final discussion that synthesises the main ideas raised by the audience and presenters. The symposium is intended to generate discussion and feedback from the audience. All of the presenters will address several shared questions: a) how is TPACK being interpreted, b) how is ICT being embedded to develop technological, pedagogical and content knowledge in a subject-specific context, c) how is ICT being embedded into the Faculty and graduate standards, and e) how do Faculties sustain this type of systemic change?

Shaista Bibi and David Ashe will discuss a knowledge in pieces theoretical framework which may allow a more detailed exploration of the nature of TPACK. Knowledge in pieces was developed as a theory to explain the nature of physics knowledge and has since been used to explore diverse aspects of knowledge such as epistemology, pedagogy and transfer. This theory may help in gaining a better, more nuanced understanding of how different knowledge elements are integrated.

References

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- Education Services Australia. (2010). *ICT Professional Learning: National Mapping of ICT-related Professional Learning*. Melbourne, VIC: Education Services Australia Ltd.

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