

Towards Systemic Professional Development: Teachers as E-Designers

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We depict and discuss a key outcome of the first year of a large three-year Australian Research Council supported e-learning research and development project (DESCANT – SciTech: Designing E-learning Systems to Celebrate and Nurture Teaching in Science and Technology). This collaboration with the New South Wales Department of Education and Training (DET) tests an innovative strategy for seeding a future-oriented, sustainable and effective professional development system for elementary school Science and Technology teachers. Initially, a group of teachers is designing and prototyping an e-learning environment to address teachers' professional development needs, as they see them, supported by their consultant, DET officers and University researchers. DESCANT culminates a long history of investigations of learning and teaching, exploring the educational potency of a generative theory of learning. Here, learning is conceived (after Edelman, 1992; Plotkin, 1994, 1997, 2002) as iterative cycles of generating ideas, testing them on their value and keeping those that survive the tests (Schaverien and Cosgrove, 1999, 2000). This view of learning plays out in DESCANT at many levels. Teachers play key roles as researchers and designers. Researchers use established anthropological and ethnographic approaches, notably research conversations, to construct a rich case study of an emergent strategy as it builds in scale.

Eleven teachers from six rural schools volunteered to participate in the first phase of the DESCANT project. They engaged in a mix of face-to-face conversations and workshop days, mentored webboard discussions and immersion in a range of e-learning environments designed to support their eventual conception and prototyping of their own e-learning environment for professional development of elementary Science and Technology teachers. In particular, teachers immersed themselves in the Generative Virtual Classroom (GVC), an e-learning environment the project leader had developed and used in teacher education. Teachers made a virtual excursion to at least one other e-learning environment; however, they later acknowledged the GVC was a powerful "object-to-think-with" (after Papert, 1980) about e-learning environments and their professional development potential. After two and a half months, teachers met with their consultant, university researchers and DET officers (including IT officers) to design their environment. Then, they returned to their schools to develop content with which to populate that environment. Webboard discussions and video-recorded face-to-face conversations and workshop days, including development and features of the e-learning design itself, yielded rich research data.

The group mapped a four-component journey, over which learner-teachers could chart progression:

1. A "self-test" with which learner-teachers would begin.
2. Video excerpts of strong examples of student learning, from designer-teachers' own classrooms, with text focusing learner-teachers' attention or prompting interest.
3. A private notepad in which learner-teachers could record their views as they progressed, as well as a forum where community discussion could occur and be facilitated.
4. A culminating task: a video excerpt from learner-teachers' classrooms with accompanying text.

We showcase and analyse this design, in the light of DESCANT's particular implementation. We speculate as to the potency of this e-designing for making visible aspects of this group's learning, and its implications for understanding individual, group and systemic professional development.

References

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