

Developing scholarship through collaboration in an online roleplay-simulation: Mekong eSim, a case study

Denise Kirkpatrick, Teaching and Learning Centre, University of New England,
Robert G. McLaughlan, National Centre for Groundwater, University of Technology, Sydney,
Holger R. Maier, Department of Civil and Environmental Engineering, The University of Adelaide,
and **Philip Hirsch**, School of Geosciences, The University of Sydney
dkirkpat@metz.une.edu.au robert.mclaughlan@uts.edu.au hmaier@civeng.adelaide.edu.au
hirsch@mail.usyd.edu.au

Abstract: Mekong e-Sim was designed to create an authentic learning environment in which students from different disciplines work together to learn about the complexities of environmental decision-making. The version of Mekong e-Sim that is reported here involved students of the subjects Asia-Pacific Development (geography), Technology Assessment (technological developments and impacts in engineering) and Environmental Engineering. During the Mekong e-Sim, students collaborated to adopt different stakeholder roles and initiate and respond to major events relating to economic and environmental development in the Mekong region. Key tasks included responding to topical news events, making submissions to public planning inquiries, writing reports and debating development issues in the Mekong region. Through their participation in Mekong e-Sim, students developed understanding of the complexities of decision-making, appreciation of the range of perspectives associated with environmental management and developed subject specific skills and understandings. A description of the design and evaluation of the Mekong e-Sim is provided in McLaughlan et al. (2001). The development of the teaching project was a collaborative, cross-institutional teaching development that brought together staff with a range of skills and expertise.

Despite the fact that there has been increasing attention to scholarly values in universities in recent years there has been little consideration of what this might look like. This paper uses the case of the development and teaching of Mekong e-Sim to investigate scholarly teaching, particularly the process and practice of scholarship and teaching in a team situation.

Introduction

In recent years the professionalism of teaching has received increased attention. In part this was supported by the quality assurance activities of the early nineties and increased external pressure and support for a focus on teaching in addition to the traditional valuing of research in academia. Debate about the scholarship of teaching and the nature of teaching as a scholarly activity has moved beyond the circles of academic staff developers to an emphasis on recognizing and rewarding scholarly approaches to teaching through promotion and probationary processes in universities. Government initiatives such as the CUTSD and CAUT teaching grants have been accompanied by institutional level teaching development grants which have sought to encourage and reward innovation in teaching, and attempt to position teaching as a scholarly activity with characteristics similar to those associated with research activity.

A common feature of the various interpretations of scholarly teaching is an intention to improve student learning. Literature on the scholarship of teaching focuses on teacher's engagement in a critical appraisal of their teaching with their peers; establishing a discourse of teaching and the dissemination of innovative practice (Boyer, 1990; Shulman, 1999). Hutchings and Shulman (1990) see scholarly teaching as including gathering evidence about one's teaching, drawing on current ideas about teaching and learning, inviting peer collaboration and review and making teaching public, or extending the sphere of influence by inviting public critique in order to continue the inquiry into student learning.

In this paper we analyse our involvement in Mekong e-Sim drawing on four dimensions of scholarship in teaching proposed by Trigwell et al. (2000):

- engagement with the scholarly contributions of others, being informed about the literature of teaching and learning generally and in one's discipline;



- reflecting on one's own practice;
- communicating what is known and practiced; and
- focusing on student learning as well as teaching.

While the preceding points identify characteristics of scholarly teaching from an individual perspective, Mekong e-Sim was a collaborative teaching project. Traditionally scholarship has been defined through research activities involving collaborative projects where scholars work together, engage in critical review of each other's work and develop joint solutions to problems. However, teaching has predominantly been seen as an individual activity. The Mekong e-Sim project provides an example of teaching following a scholarly model in which we collaborated to critically review each other's work and develop shared solutions to issues and problems related to teaching and learning.

The Mekong e-Sim team sought to create a learning experience that would provide students from different subject areas with opportunities to interact with each other and engage in collaborative learning activities designed to develop an understanding of the range of perspectives relating to a complex, environmental decision-making scenario and an understanding of factors influencing these perspectives. Mekong e-Sim was intended to provide a rich and authentic learning environment in which students would engage in meaningful tasks that directly contributed to their learning of substantive content and encourage the development of generalisable skills (e.g. decision-making, collaboration) and understandings (e.g. understanding multiple perspectives). Finally, the collaborative online tasks involved in Mekong e-Sim assisted in preparing students for the requirements of today's global industries where workers and consultants, involved in common projects, are geographically separated. The following section provides an overview of the features of the Mekong e-Sim project that exemplify characteristics of scholarly teaching activity.

Understanding teaching through engagement with the literature

While Mekong e-Sim had grown from team members' previous work with similar teaching strategies (McLaughlan and Kirkpatrick, 1999; Maier and McLaughlan, 2001), we also read widely in relation to the design and use of simulations and roleplays, the effective use of technologies in teaching, evaluation, collaborative student learning, effective design of assessment tasks, and alignment of teaching and learning. Those less familiar with the Mekong regional context of the e-Sim also developed an awareness of relevant issues. Our engagement with the literature is reflected in the design of Mekong e-Sim, the structure of activities and the use of a range of assessment strategies including peer assessment. Individuals shared their reading informally through face-to-face and email conversations and discussion and by disseminating key readings that were central to the project. A face-to-face meeting late in 2000 provided an opportunity to share understandings and establish a framework for developing the e-Sim and working together.

Reflection on teaching

Members of the team were concerned with identifying the effectiveness of teaching through the e-Sim and the quality of student learning that resulted and we wanted to do this from the students' perspective. Consequently, we collected a range of data from students about their learning, their experiences during the learning activity and their perceptions of the project. We adopted a structured, planned approach to evaluating the effectiveness of the design, technology, learning activities and student learning through individual journals, regular meetings and reflective discussion. We systematically monitored the success of the implementation, fine-tuning the activity as necessary, and keeping formal records of the implementation with notations about future modification. We consciously adopted an evidence-based approach to our work using information from staff and student participants and sought to improve our teaching by seeing it from the perspective of student learning.

Team based educational developments are always challenging, Mekong e-Sim involved the collaboration across institutions of four academic staff and four groups of students. Managing the

multiple levels of interaction and engagement was not always easy. Our own experiences as we attempted to work effectively at a distance reminded us of the difficulties that our students were facing. We noted the experience of collaborating as teachers, reflecting on our joint planning, the processes of communicating asynchronously and at a distance, and of the various perspectives that each member brought to the team. Diary, entries focused on the interactions of the team, and individual's learning about collaboration and educational design. We were interested in identifying the factors that appeared to influence successful collaboration and project development, looking at ways of reconciling differences in teaching practice, values and cultures.

Communicating what is known and practiced

The team made their experiences public through formal communication via conference presentations, institutional seminars, peer reviewed publication and submission to examination through events such as this; the Pearson Education UniServe Science Teaching Award review process. These processes required us to engage further with literature in the field, reflect on our experience, communicate our practice to others, consider the implications of our data and results, and to continue to critique each other's ideas. Additionally the process of peer review provided external feedback and brought new perspectives to our understanding of what had occurred. The development of this project began in 2000 and it was first implemented in 2001. Consequently our activities in relation to communicating our experiences and learning are just commencing. Already the process of developing papers for communicating about this project has assisted us in clarifying our understanding of what we are doing and opened the project up for comment and critique from others.

Investigating our teaching with a focus on student learning

We decided that this project would be the site of planned and purposeful investigation of our teaching. While the teaching team shared responsibility for this, it was decided to include in the team a member from another university who was not involved in teaching the subjects that contributed to the project. This person was able to plan an approach to evaluation that included the collection of objective and relatively unbiased evidence and data, and brought an outside perspective to the project.

Teaching members of the team opened their teaching to interrogation by each other. The online environment in which the e-Sim was located provided a permanent public record of all online interaction, thus allowing all team members to see the comments and responses of their colleagues. The results of all evaluations were shared among the team, analysed and responded to. Beliefs about student learning and assessment were openly discussed and debated during the design assessment tasks and individuals' marking practices were shared through the comparison of student performance and analysis of learning. The focus of the Mekong e-Sim project was clearly on developing a high quality learning experience for students and our evaluation of the project investigated the quality of the student experience and their learning outcomes.

Developing Mekong e-Sim

In developing Mekong e-Sim we responded to pressure for university teaching to meet institutional and student expectations of flexibility, and for university courses to prepare students for scholarly and professional practice. There is also an emerging expectation that professional university courses will address the social implications of practice (McInnes, Hartley and Anderson, 2001; Institution of Engineers, 1996), and integrate disciplinary knowledge with generic skills or graduate attributes (ATN, 2000).

It was in this context that we decided to collaborate to develop a cross-institutional, cross-disciplinary web-based roleplay-simulation. The Mekong e-Sim team comprised three teaching academics (who coordinated the subjects in which the project was located) from three different institutions and several disciplines and a fourth academic from another institution whose role was to provide educational design advice and plan and conduct evaluation. Previous experiences had



convinced three of the participants that online roleplay-simulations were effective techniques for actively engaging students in learning about multiple perspectives associated with decision-making in complex situations. Team members saw that added value could result from using an online roleplay-simulation to involve students across disciplines. The cross-institutional nature of the collaboration was a consequence of the interested individuals working in different universities.

Following initial conversations that indicated an interest and commitment to developing a cross-institutional project, a face-to-face planning meeting provided the opportunity to clarify how previous e-Sims could be adapted to support the learning objectives of three different subjects and to design specific features of what was to become Mekong e-Sim. Two of the academics had a well developed understanding of teaching and learning issues associated with the application of e-Sims among relatively homogenous cohorts of students studying a single subject (Kirkpatrick and McLaughlan, 2001) and to a limited extent multidisciplinary groups (McLaughlan and Kirkpatrick, 2001). Creating an authentic context for learning among geographers and engineers located across different institutions required a planned, systematic approach.

A scholarly team approach

Benjamin (2000) and Martin (1999) highlight the importance of a scholarly team tackling shared problems and developing joint solutions to these issues. The design of Mekong e-Sim was clearly a shared issue and the resulting learning activity was a collaborative development. The team agreed that a primary goal of the e-Sim was to be the development of student appreciation of multiple perspectives about complex environmental and social issues and that this was relevant to the three subjects that were to contribute to the e-Sim. Individual team members identified issues within their own disciplinary and academic and institutional context that would need to be addressed or accommodated within the project. Discussion identified commonalities and differences in the curricula of the three subjects that had been identified as suitable for involvement in the project. While there was clear agreement among team members about the goal of the e-Sim, there was substantial discussion relating to exactly what it meant for students to develop an understanding of multiple perspectives and about the most appropriate ways of achieving this. For example: team members' opinions about teaching for an understanding of multiple perspectives varied from a belief that variation and complexity need to be explicitly identified and taught, that students should develop an understanding of variation by experiencing events from the perspective of an 'other' and that understanding of variation should be taught in a relational manner.

Decision-making about the most appropriate method and principles for allocating roles to students was another site of debate. A central feature of roleplay-simulations is the adoption of personae and there was initial disagreement among team members about the value of different approaches to allocating personae. There were different opinions about whether students should take a role that was associated with their discipline and hence further develop their knowledge and skills or whether they should develop knowledge and skills associated with a new and unfamiliar role. It was agreed to adopt a combination of personae allocation strategies using the allocation of a persona to a group of students from a similar background and blended groups where students from different disciplines and courses would share a persona. Our investigation of the effectiveness of design therefore included consideration of the efficacy of each approach.

During the development of this collaboration we recognised that in order to integrate the shared online roleplay-simulation into our teaching practice it was critical to identify features of each academic and institutional context and the consequences of these on the collaborative project. Team members acknowledged the potential issues that could arise as a consequence of differences related to disciplinary norms and values, institutional organisational arrangements, marking and grading practices and student characteristics (McLaughlan et al., 2001). The collaborative nature of Mekong e-Sim required individuals within the team to be flexible and willing to change practices and preferences in order to develop a consistent approach to assessment within the e-Sim. A feature of

the collaborative project is that all students share a common experience (i.e. Mekong e-Sim) with the same set of scenarios and interactions. Past experience indicated that assessment tasks should be similarly weighted in order to promote goal alignment. Negotiating a shared approach to assessment stimulated reflection and debate about the role of assessment and specifics of practice.

Mekong e-Sim was designed as a cross-institutional learning activity that would require students from different courses in different universities to work collaboratively. This required careful attention to the design of groups and consideration of the different ways in which groups could be organized and the relative merits of various approaches. Significant discussion surrounded the design and planning of the strategies for the formation of groups and support for group interactions and dynamics. The team needed to consider strategies that would support the development of groups at a distance and techniques for maintaining and progressing small and large group development.

Conclusion

In the process of developing and implementing Mekong e-Sim across three subjects in four institutions we attempted to adopt a scholarly approach to team teaching and development. We believe that our efforts have provided useful direction for the effective design of e-sims and insight into cross-institutional teaching collaborations. Students have provided us with rich information about the benefits of such activities and suggestions about ways in which they can be improved. We have questioned and at times revised our own beliefs and values in relation to teaching and learning. While we have learned much, and have a better understanding of many aspects of distributed learning supported by technology our experience has raised new questions for us. Mekong e-Sim was prompted by the interest and enthusiasm of individuals, we need to explore the ways in which such innovations can be supported and institutionalised. There is more to learn about how to design these activities so that they create a shared learning experience that accommodates contextual differences.

Acknowledgments

This work has been supported by The University of Adelaide, the University of Technology, Sydney and the Australian Mekong Resource Centre at The University of Sydney.

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