E-teachers collaborating: Process based professional development for e-teaching

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This paper is the final report on this research project as required by the ASCILITE research grant conditions and outlines the research project background, rationale and methodology, and discusses results and conclusions. The project initiated the process of collegial development of a theoretically informed framework which enabled lecturers to retrospectively analyse what they did to create an effective online teacher presence and thereby facilitate a more productive online learning environment for their students. The project involved a pilot group of tertiary e-teachers interacting with an established theoretical framework - seven principles for good practice in undergraduate education (Chickering and Gamson, 1987). They developed, by a consensus process, using a mixture of face-to-face interaction and an online wiki, an extended version of this framework to analyse online interactions for evidence of their teacher presence. Working as a collegial group, lecturers then formulated a process which facilitated peer analysis and review of this data to identify both strengths and areas for further professional learning. Lecturers were invited to self-review an online course which contained examples of online interaction – these were discussed in triads with two other colleagues acting as peer reviewer and interviewer. Several themes emerged from the project conclusions – the framework developed had much in common with other existing evaluative frameworks, staff involved generally reported the process as a positive one, with greater commitment and ownership because of the collegial development, and one of the difficulties participants encountered was the time commitment required.

Introduction

Lecturers (e-teachers) who get involved with e-learning face a number of challenges. Often they are grappling with a way of teaching in which they have no experience as learners, and while feedback processes may be available for monitoring and analysing the face-to-face lecturing environment, few systems are in place in most institutions to give supportive feedback to staff about their teaching effectiveness in the online environment. For both lecturers new to e-learning and more experienced staff, feedback is often anecdotal, or limited to infrequent student evaluation surveys, or based on global course statistics such as retention and completion rates. There are few well-known conceptual frameworks to analyse this feedback and lecturers are sometimes daunted by ‘best practice’ e-teaching guidelines which often turn out to be long and detailed checklists of what the lecturer should be doing online.

The seven principles for good practice in undergraduate education have been used as guidelines for effective teaching and learning in the face-to-face environment for over 20 years. Extrapolating these to the e-learning environment, lecturers formulated a framework which enables them to analyse their actions in the online environment. Each lecturer did this by a portfolio approach, either using the selected LMS online course as an e-portfolio or by outputting printed copy. As this data is recorded automatically by the Learning Management System software, very little additional work is required by the lecturer to gather this data.

A concern often expressed is the need for lecturers to ‘buy in’ to any evaluation process in the context of a supportive and encouraging environment which stimulates ongoing professional learning. This concern is heightened when lecturers are working in a different learning system where increased vulnerabilities are present. Any evaluative process of online teaching practice must give teachers the confidence to be able to review and receive feedback for this new and challenging dimension in their teaching role. As the process within this project were shaped and owned by those involved was deemed to therefore be more likely to lead to transformative professional learning. Also, as outlined more fully within the methodology section, this project involved an approach to reflective evaluation which took some cognisance of the competing time demands on lecturers involved in this process.

Literature

There have been a limited number of research contributions for this specific area of inquiry. There are recent studies examining faculty development for successful teaching online (for example, Yang & Cornelius, 2005, McQuiggan, 2007, Mandernach, Donnelli, Dailey & Schulte, 2005, and Taylor & McQuiggan, 2008) and studies which examine the role of peer observation for e-learning professional development (for example, Bennett and Barp, 2008). These studies focus on different aspects of the online environment in terms of teaching and learning and professional development than the project focus and particularly the use of the Chickering and Gamson (1987) framework as a starting point. They also report the results of using existing evaluative frameworks rather than participants developing and then implementing their own framework.

There have been several case studies reported in the literature which relate more closely to this project. One case study which is relevant (Graham, Cagiltay, Lim, Craner & Duffy, 2001) applied the seven principles to evaluating four online courses at a mid-western American university. However this was a highly labour-intensive evaluation involving the analysis of 'hundreds of pages of information and thousands of student and instructor postings' and this approach required large amounts of time from the reviewers as well as the teaching staff to implement. Consequently, it has little generic application to the field of tertiary e-learning because of its high time commitment and resource-intensive nature. Another example of the application of the seven principles to the online environment is the work of Pavano & Gould (2004), who as current online practitioners listed a limited number of suggested indicators of best practice for each principle in a journal editorial.

Another relevant study formulated and tested a tool for measuring all the elements of teacher presence using content analysis (Anderson, Rourke, Garrison & Archer, 2001). Teacher presence is a term used to describe one component of the model composed of three 'presences' outlined by Anderson, Archer and Garrison (2000). This study used content analysis to code lecturer postings and is a useful contribution to this area of research. The focus of this study on analysis of discussion postings only is a limitation in the current LMS environment which provides a much wider range of interactive tools for student-teacher interaction. However this study does provide an alternative model for evaluating what the lecturer does online compared to the seven principles for good practice framework.

Seven principles for good practice

The key literature item which was used as a starting point for development of the framework by the participants was the seven principles for good practice in undergraduate education (Chickering and Gamson, 1987). These have been used as guidelines for effective teaching and learning in the face-to-face environment for over 20 years. A summary of the key points is listed below.

Good practice in undergraduate education:

1. encourages contact between students and faculty,
2. develops reciprocity and cooperation among students,
3. encourages active learning,
4. gives prompt feedback,
5. emphasises time on task,
6. communicates high expectations, and
7. respects diverse talents and ways of learning.

Extrapolating these to the e-learning environment, participating lecturers formulated a framework of good practice in relation to teacher presence which enabled them to analyse their online actions in relation to teacher presence in the e-learning environment.

The research questions

The research questions which acted as a focus of this study were:

- What are the features and criteria of a framework for evaluating elements of teacher presence in online teaching developed from the seven principles of good practice ?

- What process, using the developed framework, will enable the strengths of the e-learning lecturer to be affirmed as well as identifying areas for ongoing professional learning in online teaching?

Methodology

This project was carried out within a participatory action research paradigm because of its established link with professional learning, collaboration and the fact that rather than being imposed from without, it involves those responsible for the practice to be improved. Action research has previously been proposed and practised as a professional development model in adult education (Coles, 1999; McNiff, 2002). Professional development through action research "builds on a model of learning, where practitioners are challenged and helped to find new ways of doing things" (McNiff, 2002). It is participatory research which enables people to work towards the improvement of their own practices through an increased awareness of their capabilities and their influence on the teaching/learning process. In action research approaches, the practitioner(s) talk through ideas with a listening supporter (the researcher) (McNiff, 2002). In keeping with a participatory action research approach, the researcher was very much committed to the learning within the process and while outside the project he/she was not a detached observer.

Stenhouse (1981) traces the historical emergence of case study research in education back to the curriculum evaluation studies of the 1960's. He broadly categorises case study research into three camps, purely descriptive case studies, evaluative case studies involving some degree of judgment and critical analysis and action research in which case study or studies inform the formative process of development and improvement in an institution. The research project fits the last category, with the predominance of qualitative data collection using a wiki, participant questionnaire and short interviews with participants. It is a *singular site* case study (Denzin & Lincoln, 1998) and does not seek to compare or contrast the framework or process the group develops with other groups either inside or outside the institution.

Participants were six volunteer lecturers from a small New Zealand undergraduate tertiary institute working with the researcher who acted as a participant/observer. These participants represented a range of online teaching experience – two had minimal experience (taught less than two web-enhanced online courses), two had moderate experience and two had considerable experience (taught ten+ courses online). Permission was sought from students for access by other lecturers to course interaction contained in the selected courses which were used for the review process.

The research sought to develop and refine a framework and process for lecturers to understand, analyse and improve teacher presence based on the seven principles for good practice. Both the framework (as it applies to the e-learning environment) and the review process were developed collectively and collaboratively by participants.

The framework was used by participants to review courses taught online by members of the group. The courses were all web-enhanced, blended courses with the majority of learning activities online but most with some face-to-face classes, usually a one week block course. The framework and process have been evaluated by the practitioners at the end of the project through a questionnaire and short interview on key themes of the project – this included conversations on the usefulness of the framework and process, whether they found the process supportive and helpful, and whether it enabled them to identify strengths and areas for improvement in their online teacher role.

The Framework Indicators

The participants collaboratively completed an initial framework, comprising 30 primary indicators of teacher presence in the online environment, and 41 secondary indicators. These indicators have been formulated and rated by the group using a consensus/voting process with a mixture of face-to-face meetings and a wiki to record and collectively modify suggested indicators. For an indicator to be judged as a primary indicator at least five participants had to agree that it was a 'must have' not a 'nice to have'. Table 1 gives some examples of the primary indicators developed by the participants, the original principle they relate to from the Chickering & Gamson (1987) principles, and a comparison to similar elements from Marshall & Mitchell's (2004) model listed in the third column.

As can be seen from Table 1 above, the primary indicators which have been developed by the participants are relatively coherent in relation to another model, although in some cases there are no equivalent statements to the items formulated by participants (e.g. First principle – e-Learning maturity model).

Table 1: Examples of primary indicators and comparison to Marshall & Mitchell's (2004) model

Chickering and Gamson Principles	Examples of online indicators formulated by participants	e-Learning Maturity Model Marshall and Mitchell (2004)
One: Encourages contact between students and faculty	Staff member provides personal details, photo, brief comments relevant to major themes of the course clear information provided for students about who does what, who to contact (e.g. Course-related, administration-related, technical problems)	No equivalent L3 Faculty clearly communicate how communication channels should be used during a course or programme
Two: Develops reciprocity and co-operation among students	Provides good briefing and clear instructions on collaborative (student) activity, manages group process	L2 Student interaction with faculty and other students is an essential characteristic and is facilitated through a variety of ways
Three: Encourages active learning	Facilitates online activities which are student-centred and require more than one student input (i.e. not just a single discussion forum posting) Use simple tools in creative ways (e.g. discussion forums for online role-playing, e-tivities, case studies etc.)	L1 Courses are designed to require students to engage themselves in analysis, synthesis and evaluation as part of their course and program requirements L10 Courses are designed to support a diversity of learning styles and ensure accessibility
Four: Gives prompt feedback	Sets lecturer parameters for prompt feedback response times and communicates these clearly to students (& deadlines for student response times where required)	L4 faculty manage student expectations over the type and timeliness of responses to student communications
Five: Emphasises time on task	Online course includes multiple media (study guide calendar page, online calendar, dates in topic blocks) that cue students to what they should be doing and when it needs to be done by	L9 Student work is subject to clearly communicated timetables and deadlines
Six: Communicates high expectations	Provides model answers and exemplars for students which set a high standard including correct APA or designated referencing format	L8 Assessment of students communicates high expectations
Seven: Respects diverse talents and ways of learning	Students are given a variety of activities and assignments – e.g. personal journaling, book reviews, Powerpoint presentations, digital stories, essays, seminars, webquests	L10 Courses are designed to support a diversity of learning styles and ensure accessibility

Overall however, nine out of ten of the Learning practices of Marshall & Mitchell's (2004) model have parallels in the primary indicators of the framework developed by participants. The primary indicators also have some congruence and consistency with other examples of existing good practice indicator lists (such as Haynes, 2001). Milne & Dimock (2005) in their e-Learning Guidelines list several guidelines that are also congruent with these indicators – for example, in the Teaching Relationships section – Guideline TT3 "Is there evidence of timely, accurate and well-targeted feedback to students?" However it must be noted that thematic matches between other schema and the primary indicators are common but exactly equivalent word matches are not.

The time spent on developing the framework of indicators involved 8.5 hours of face-to-face time at seven meetings, and approximately 3 – 4.5 hours contributing to the online wiki for the participants over a period of five months. Each participant had a total time spent on framework development of between 11.5 and 13 hours.

The collegial appraisal process

The process for review of online courses was developed and named by the participants – given the title the Collegial Appraisal Process (CAP) it involved triads of staff acting in the roles of course lecturer/self-

reviewer, peer reviewer and interviewer. The review process for online courses was seen as a collegial and professional development-oriented conversation rather than an evaluative compliance checklist exercise. The process sequence was that the course lecturer would do an initial self-review using a form based on the framework of indicators which he/she would pass on to the peer reviewer. This self-review would assist the peer reviewer in completing the peer review component, but the peer reviewer was not restricted to the evidence suggested by the course lecturer and was able to scan the online course for other confirmatory or contradictory evidence. The review meetings were convened by the person designated as interviewer, who had a 'chairperson' role as well as guiding the professional conversation with some open-ended questions for the course lecturer/self-reviewer. Each participant rotated in the triads to perform at least two of the roles in the process, but as one participant had left the institution by this time it was not possible for all the participants to complete all three roles of the process.

Time spent in the collegial appraisal process varied according to the time spent on the lecturer's self-review of their online course. The times taken to do this self-review ranged from under an hour to five-six hours with the average being two hours. The review meetings themselves took between one and one and a half hours, so an overall 'average' time for someone to participate in three review meetings (one as self-reviewer, one as interviewer and one as peer reviewer) as well as do their own course self- review was between five and six hours. One participant, however, spent almost twice this time because of the longer time taken for their self-review part of the process.

Table 2 Participant questionnaire results

Questions	Participant Ratings				
1. I found the review process helpful to my development as an online teacher	Very unhelpful	unhelpful	Neither helpful nor unhelpful	helpful	Very helpful
				4	**2**
2. The group process of working together on the framework and criteria for reviewing courses made me more committed to the review criteria than if I had simply been handed a checklist to use	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
				4	**2**
3. I found the review process a positive and supportive experience	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
				2	**3**
4. I usually agreed with the group about ratings and/or wording of the criteria items for the review framework	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
				6	
5. My current strengths in e-learning were identified and affirmed	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
			1	**2**	**3**
6. As a result of participating in the Collegial Appraisal Process I have identified changes to make in order to improve my teacher presence in my online courses	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
		1		**2**	**2**
7a. I would recommend participation in the Collegial Appraisal Process to other lecturers who are teaching online in my institution	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
				2	**3**
8. Do you think repeating this process every 2-3 years would be beneficial for your ongoing professional development in e-learning ?	Strongly disagree	disagree	Neither agree nor disagree	agree	Strongly agree
		2	**1**	**2**	

Results and discussion

As previously mentioned, one lecturer changed jobs and left the institution, so that person's online course review was not completed. However, the person completed the final questionnaire for the questions relating to the components of the process they had participated in. Another lecturer was moved into a management role during the project and these duties meant that he did not have a current online course to review when that phase of the project was in process. He did, however, take the roles of peer reviewer and interviewer for other participants. The results from the questionnaire ratings questions completed by all six participants at the end of the review process are outlined in Table 2:

These results are shown graphically in Figure 1 below:

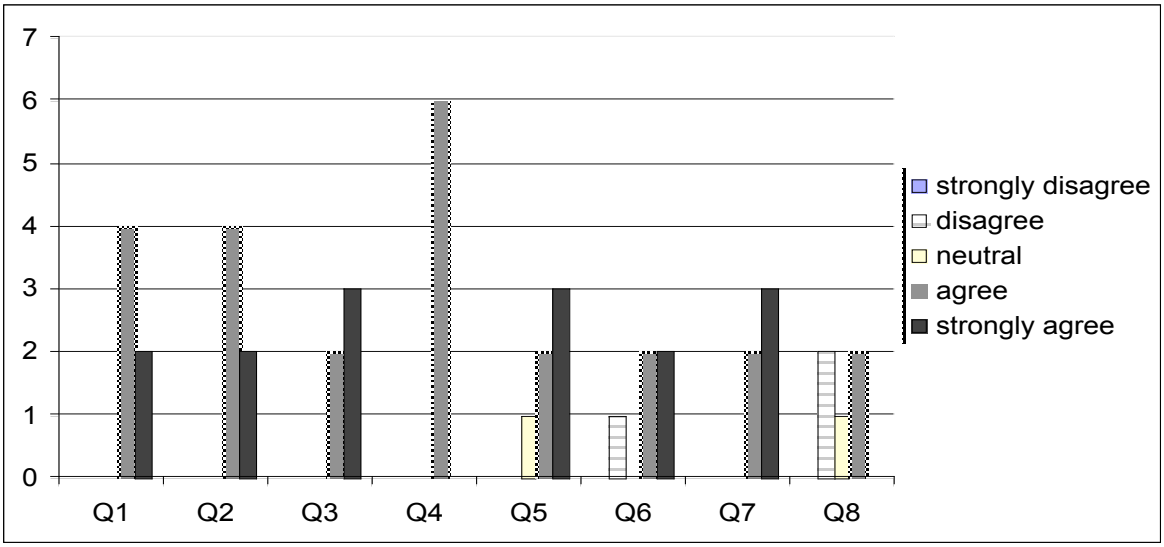

Figure 1: Graph of participant questionnaire results

In general the questionnaire responses show a number of positives about the indicator development and review process that participants were involved in. The response to Question four showed participants achieved a high degree of unanimity about the framework indicators they worked on. The response to Question two shows that they had more ownership and felt more committed to implementing the framework indicators as a review schema because it had been collaboratively developed by the group. Responses to the other questions indicate that they thought that the review process was supportive, collegial and helped them reflect on and develop their online teacher presence. This theme was continued by a number of the written and spoken comments recorded by participants. The question which showed the most variation was Question eight – one probable reason for this was the ambiguity of the question – in conversation, participants noted that they would not want to repeat the whole framework development process on a two-three year cycle, where the intention of the question was actually to ask if they would wish to repeat the Collegial Appraisal Process in this time frame. The one 'disagree' response to Question six was from a participant who felt that their existing online teacher presence was affirmed as being exemplary by the process so no changes were desirable or necessary.

Comments from participants

A range of comments were made by participants both in written form on the questionnaire in Question 7b 'Would you have any points to make about this process that you would include when conversing with colleagues about participating in it ?' and Question 10 'any other comments ?'. Additional comments were recorded from the review process meetings and from short informal interviews with the researcher. Several participants noted the usefulness of the initial framework formulations discussions and the frustration that time constraints and the project focus restricted the range of professional conversation possible, for example:

> It would be good to make time to tease out some of the ideas that were related to e-learning (and teaching) more generally but that could only be touched on because of the structured nature of the process and aims.

All of the participants made positive comments about the process and its value to them as online teachers:

> a positive experience which impacts your online teaching in constructive ways
>
> not threatening i.e. it is focused on being clear about specific examples of good practice and areas for development
>
> the collegial nature of the process and the genuine discussion around teaching and learning – it is a formative time and I am grateful for the input of my colleagues – when my course was being reviewed but also when reviewing another's course

> good informal PD and an opportunity to share expertise. A safe, trusting environment was created by the researcher
>
> having a group of three was great – the boundary between the interviewer and chair blurred somewhat – and helpfully so
>
> good way to get a sense of where your practice sits in relation to that of others
>
> the mix of people was particularly effective in the groups I ended up with – probably a key ingredient in its success
>
> the process was warmly collegial and supportive

Some participants identified changes that needed to be made to improve their online teacher presence, and areas for professional development in their e-teaching role, for example:

> I saw the need to be more actively involved in a regular way online
>
> could use a wider variety of electronic activities, I need to get a handle on the range available

As well there were some comments from participants which suggested some more refining of the framework indicators:

> the critique form based on the 7 principles was really helpful on the whole. I did make some comments on the review form about a couple of criteria that I thought were not relevant or helpful
>
> I think some review and redevelopment of indicators would be useful

Participants also provided comments on the benefit of a shorter time frame for the whole process, and possible generalisation of the Collegial Appraisal Process to the rest of the teaching staff:

> there was quite a time lag for some people between creating the indicators/review questionnaire and actually utilising it – which leads me to believe that someone outside the research group could easily use the [indicators]form to appraise online courses in regards to teacher presence
>
> I think it would work better if less protracted

The final two quotes reflect that time constraints caused by institutional factors, staff changes and busy lecturer schedules meant that while one online course was reviewed immediately following the completion of the framework indicator development at the end of Semester 2 in 2007, other courses were reviewed during Semester 1 in 2008 after the summer holiday break.

The greatest challenge for the project was scheduling time for the face-to-face meetings with busy teaching staff who had multiple areas of responsibility. This led to the 'mix and match' process of developing framework indicators by a mixture of face-to-face meetings and online editing of indicators using a wiki. These time constraints also contributed to the lag for some lecturers between the formulation of the framework of indicators and their participation in the Collegial Appraisal Process. Perhaps the allocation of workload for teaching staff that included a time allocation specifically for this type of peer-review professional development activity would be a step towards ameliorating this issue.

Conclusions

The framework features and criteria developed by participants link directly to the underlying Chickering & Gamson (1987) principles, and show coverage of key 'good practice' attributes of teacher presence online, such as clear and timely course communication, positive climate and community building, engaging, varied and purposeful learning activities and relevant assessment and feedback strategies.

The features and criteria of the framework developed showed high consistency and congruence with at least one other example of existing 'good practice' indicator lists (Marshall & Mitchell's 2004 e-Learning Maturity Model). While there were additional elements in the primary indicators developed by

participants comparative to e-Learning Maturity Model, only one of the ten 'learning' category set of practices from this model was omitted from the participants' primary indicator framework.

The process of consensus-based framework development followed by collaborative peer discussion to design, develop and name the Collegial Appraisal Process contributed to a greater sense of 'ownership' of this process as a basis for reviewing online courses taught by the participants. The Collegial Appraisal Process, which was implemented using triads, enabled the strengths of the e-learning lecturers to be affirmed as well as identifying some relevant areas for ongoing professional learning in online teaching for participating staff.

An unexpected issue that became evident during the project was that of time management and scheduling. Possibly because this was a relatively small institution there were frequent difficulties in organising and scheduling meetings which participating staff could all attend, even after an initial meeting schedule had been agreed to.

Further research following this project model at other larger institutions could show if application of this approach to e-learning professional development is able to be implemented in the context of larger tertiary organisations, and could also provide a point of comparison for framework indicators, development time and process in relation to these elements are they were developed as part of this project.

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