LECTURER–STUDENT VIEWS ON SUCCESSFUL ONLINE LEARNING ENVIRONMENTS

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ABSTRACT *While many are enthusiastic about the promises of online learning as a flexible form of learning, others are cautious and concerned with the quality of teaching and learning rendered in such environments. In response, this article reports on the findings of a study conducted to better understand the issues related to the nature of learning in online environments and how learning in such environments can be successfully facilitated. Ten online lecturers and their students were surveyed at the Faculty of Education, University of Waikato. Successful online teaching and learning was characterised as a social interactive process such as that embodied within learning communities. Teaching practices and responsibilities associated with four lecturer roles were crucial to this process–pedagogical, managerial, social and technological. Considering these multiple roles is argued to be a productive framework in enabling online lecturers to understand and act on each role's required responsibility, tasks and practices and adapt them to their particular teaching context.*

KEY WORDS

Online teaching, online learning, tertiary, New Zealand

INTRODUCTION

> I just think it is the hardest thing to do. That must be the hardest thing to do in setting up an online learning course is to get it so it works for people. You can get all the mechanics right, but then how do you get people to feel comfortable and do what they do if they were sitting in a room? (Jane, student interviewee)

Online learning as a form of distance education is increasingly recognised and accepted as part of mainstream education. The demand for online learning as a flexible and convenient manner to access educational and training opportunities is predicted to increase with the proliferation, availability and affordability of information and communication technologies [ICTs], the Internet and web-based technologies (Dhanarajan, 2001). Despite this, there have been mixed messages regarding the effectiveness of online learning in providing high quality education and learner satisfaction. Simply providing students with access to the Internet is no guarantee that worthwhile learning will take place (Swan, 2001). There is research of lecturers eager to adopt new technologies, or perhaps coerced into using new technologies, but whose adoption is superficial and technicist rather than effecting

meaningful change in either the teaching or learning (Nitza, 2007). Oliver and Herrington (2000) warn that if opportunity, competition and efficiency rather than pedagogical imperatives drive the introduction of ICTs in education then new learning technologies are likely to be simply added to the existing list of available resources and used in superficial ways akin to the notion of *gift-wrapping* (Fischer, 2003). Lecturers therefore need to consider how the technology itself can best be integrated into their teaching and learning repertoire to engage students in deeper and more meaningful teaching and learning processes and outcomes. This recognition for online pedagogies supports the notion that the lecturer's role in any teaching-learning environment, be it face-to-face or in an online setting, is of key importance (Forret, Khoo, & Cowie, 2006). That successful online teaching and learning is not simply the transfer of traditional teaching methods into the online setting is recognised by the student quoted in the introduction to this paper.

Current research and practice in successful online pedagogies support the development of a learning community in facilitating teaching-learning in online environments. The development of learning communities recognises that the social phenomenon of the community can facilitate and support the learning process in online learning. A learning community describes a cohesive group of people with a specific focus on learning as transformatory participation and is concerned with teaching-learning processes and outcomes (Bielaczyc & Collins, 1999). This community generally has features such as shared goals, a positive socio-emotional environment for learning, active participation and distributed expertise. Developing learning communities align with socio-cultural perspectives regarding mental processes as situated in a broader community's valued historical, social, institutional and cultural context (Brown, Collins, & Duguid, 1989). This perspective of learning implies that learning is heavily shaped by the shifting roles and relationships and formation of identities as a way to manage diversity (Lave & Wenger, 1991; Wenger, 1998). Members of a learning community participate in the community's valued activities by simultaneously performing several roles, each of which implies a different sort of responsibility, a different set of role relations, and a different interactive involvement (Lave & Wenger, 1991).

In this paper we report on research into lecturer and student perceptions of successful online learning. We provide evidence that successful online environments acknowledge the social aspects of learning and the complexity of an online lecturer's role and discuss the implications of this.

THE RESEARCH CONTEXT

Since the introduction of the Mixed Media programme (MMP) in the Faculty of Education, the first of its kind in primary teacher education in New Zealand, online teaching and learning has grown steadily at the University of Waikato. The term "mixed media" describes a combination of both face-to-face and online or web-based approaches used in the Bachelor of Teaching (Primary) programme since 1997. This paper focuses on the views of lecturers, most of whom were involved in the MMP, and their students on the nature of online learning and how learning can be successfully facilitated in such environments. A qualitative interpretive

methodology underpinned this study. Data were generated as a part of a larger project aimed at understanding the pedagogical design and implementation issues that promote successful online teaching-learning.

Ten online lecturers were interviewed. Table 1 shows the number of years they have been teaching online, the level of courses taught and the number of students enrolled in their course(s).

Table 1. Participating Lecturers in the Study (n=10)

Lecturer[a]	Online Teaching Experience (years)	Course Level	Number of Students Enrolled
Basil	6	Undergraduate	21
Marge	6	Undergraduate	80
Nola	10	Undergraduate	-
Ralph	6	Undergraduate	46
Laura[b]	2	Undergraduate/Graduate	
Gerard[b]	15	Undergraduate/Graduate	20
Peter	6	Undergraduate	25
		Graduate	5
		Graduate	8
Lesley	2	Graduate	2
Jake	4	Graduate	15[a]
		Graduate	24[a]
		Graduate	25[a]
		Graduate	18
Tim	1	Graduate	3
Total			292

Note. [a] There were overlaps in the number of students enrolled in these courses as the same student can enrol in more than one of these courses. This inflates the number of total student participation in the study as the total count does not match the sum of the number of students enrolled in each course. [b] These lecturers co-taught the same course and had the same number of students in their class.

The lecturers assisted in providing access to their students. Although 292 students were surveyed, only 37 responded to an online questionnaire. Table 2 details these participants' background.

Table 2.   Participating Students in the Study (n=30)[a]

Characteristics		N	%
Gender	Male	5	17
	Female	25	83
Age Group	16-25 years	2	7
	26-35 years	8	27
	36-45 years	8	27
	46-55 years	9	30
	56-65 years	1	3
	66 years and above	2	7
Education Level	Undergraduate - Year 1	4	13
	Undergraduate - Year 2	3	10
	Undergraduate - Year 3	7	23
	Postgraduate	2	7
	Graduate (master's degree)	9	30
	PhD	1	3
	Others	4	13
Online Learning Experience	None. This is my first online paper	6	20
	One	4	13
	Two	4	13
	Three to five	4	13
	Six or more	12	40

Note. [a] denotes 7 missing cases

Five male (17%) and 25 female (83%) students participated in this survey. A majority, 28 (94%), were mature students. Most of the participants were experienced online learners who were quite adept in using the web-based technology for their learning purposes: only six (20%) had never experienced online learning. Twelve of these 37 participants voluntarily participated in a follow-up interview.

All interview transcripts were participant verified preceding the data analysis. The analysis involved careful reading, coding and categorising of key ideas in order to identify significant emerging themes. With the exception of Nola[1], a lecturer interviewee, who wished to be identified, pseudonyms are used for the participants.

The next section considers the findings from participant perspectives.

ONLINE LEARNING IS SOCIAL AND INTERACTIVE

Two key themes became apparent from the findings in terms of understanding the nature of learning in online environments. They are (1) online learning is a social and interactive process best characterised by the notion of a learning community, and, (2) the web-based technology affords and constrains the learning process. For the purposes of this paper, only the first theme is reported as it is more relevant to illustrating the complexities of online teaching practices. Aspects of the second theme have been reported elsewhere (see Khoo, 2005).

All lecturers viewed interactions and discussions between themselves and their students and among their students as integral to the learning process. For example, Gerard highlighted the importance of the social aspects of learning:

> I knew very very clearly that the social aspects of online learning are very very important ... in particular feeling part of a group and being able to discuss, not regard the medium as just a way of obtaining information, that I believe is very important (Gerard, p. 3).

Beatrice accentuated that students' non-participation in class dialogue equated to a lack of learning:

> I truly believe that the people who didn't contribute in the discussions wouldn't have learnt anything worthwhile because the learning is through the dialogue whether it is in the portfolio or in the forum. It's the work that a student has to do to prepare the contribution to post online that actually is the learning process for online (Beatrice, p. 8).

Student reports (eight out of the 37 survey responses and all 12 interviewees) concurred with the lecturers that social and interactive processes are integral to online learning. Aida exemplified this:

> But the way of online learning really is to read what somebody else has said and comment on it, and then it's their turn, your turn and so on … your peers help you a lot. Sometimes I might not have asked the right questions but somebody else did and when the tutor or somebody else answered the question, it was good (Aida, p. 5).

However, not all kinds of social interactions are useful to learning. Half the lecturers reported on how particular ways of interacting online can be more beneficial than others. Peter emphasised the importance of constructive dialogue:

> Some of the discussions really have just been repeating what they've been saying in the modules … there's very little point in that ... they have to go beyond what's in the modules and take people further and get them engaging with dialogue and debating about issues, then the discussions work quite well and you get a high standard of work in them (Peter, p. 18).

In elaborating on the social and interactive aspects of learning online, five lecturers suggested that this was supported through the formation of a learning community which helped students to interact more constructively and purposefully. A lecturer, Marge, accentuated this point

> I do think that being involved in a community where ideas can be shared and turned over and thought about helps other people make links for themselves and that's where this online community comes through (Marge, p. 21).

An online learning community was said to provide students with opportunities to connect socially with their peers (raised by nine students), to respect and consider others' ideas and to contribute their own (reported by seven students) as well as to participate as equals as opposed to competing with their peers (raised by five students). These ideas are stressed by students Julie and Rob:

> If you are a group, not one person has all the ideas … You have to be quite mindful of other people. You might have all these ideas and basically know the answer but you can't just go in at the beginning of the discussion and go … dedededede ... because it's ended. You'll kill it. So you have to leave it open …. You just have to like dropper it, like a dropper bit by bit so that it actually builds and everybody has a chance to speak (Julie, p.5).

> … Community of sharing, not competition. Once you get rid of the competition in the community, everyone flourishes …. Everyone works together as a community in the group to bring about the best understanding that we can from each other individually (Rob, p. 6).

Both lecturers and students valued a social interactive online class environment, best described as a learning community. The framing of a learning community implies that an online lecturer's role is multifaceted and flexible at any one time in order to meet the diverse learning needs in the online classroom. This notion is supported in the next section addressing how learning can be successfully facilitated in online contexts.

FACILITATING STUDENTS' LEARNING–FOUR ONLINE LECTURER ROLES

Commentary from both lecturers and students indicated a range of different online lecturer responsibilities, teaching practices and strategies related to the development of successful online learning environments. These were categorised as being associated with four online lecturer key roles–pedagogical, managerial, social and technological. The lecturers and students, however, differed in their emphasis of importance for some these roles as indicated through the total comments received regarding the practices, strategies and responsibilities related to each role: pedagogical (79 lecturer comments, 62 student comments), managerial (75 lecturer comments, 69 student comments), social (18 lecturer comments, 14 student comments) and technological (14 lecturer comments, 14 student comments). Lecturers were more concerned with the adoption of a pedagogical role while it was more important for students that lecturers play a clear managerial role in the online class. Minimal and no differences in total lecturer and student comments were observed for the social and technological roles.

Each of the roles is discussed in turn next.

Lecturers' pedagogical role

Lecturers were concerned chiefly with playing a pedagogical role in their online classes. They described the following strategies as productive:

- Good facilitating skills (raised by eight lecturers, 10 students),
- Lecturer approachability (raised by nine lecturers, eight students),
- Regular lecturer presence (raised by eight lecturers, eight students),
- Holding clear philosophy of teaching-learning (raised by 10 lecturers),
- Considering the suitability of teaching-learning activities (raised by six lecturers), and
- Being a co-participant/learner and listener (raised by six lecturers).

Table 3 describes these strategies and provides quotes illustrating each example.

Table 3.   Participants' Perception of Useful Pedagogical Strategies

Strategies	Descriptions	Illustrative Quotes
Lecturer developing good facilitating skills:	Lecturer facilitation of online interactions is crucial to engaging students' learning.Awareness of the <u>dynamics</u> in an online discussion and appropriate teaching practices are necessary at the start, middle and closure phases of an online discussion.	
At the start of an online discussion	The lecturer plays a more active role in introducing ideas, questions, personalising course readings, using course resources that are relevant to students' learning (e.g. scenarios and open-ended cases), using appropriate triggers for discussions and promoting student socialisation and contribution.	*If we look at the whole course to start off with and eight topics, number one has to be a starter, so that you engage the audience. So you have to have a topic that is relevant and timely, that you know that they will all be able to respond to. So that way you are engaging them.* (Nola, p. 7)
In the middle of the online discussion	Lecturer plays a monitoring role in following and sustaining the threads of discussions, stimulating further student online participation, modelling appropriate "wait time" to	*I evaluated an online programme and noticed every time a student said something in discussion, one of the staff would come in, so it was going student/staff/student/ staff/student/staff and completely shut the discussion down 'cause*

	allow students to have their say before giving feedback and providing just-in-time resources where needed.	*the student's were too damn scared to say anything because they knew they would get leapt on by a staff member. That's where understanding the dynamics of the discussion online means you have to be following it very carefully.* (Nola, p. 9)
At the end of the online discussion	Lecturer plays a less dominant role in class, summarising the key ideas from the readings and helping students to bring closure to the discussion.	*It is the end of the semester. So I have to find a way of getting closure and moving them on past the end of the course, so you come up with an initial question starter that's "as a result of some of the things you have discovered in this course, what might you do differently in the next three months?" So then they will say "well I discovered such and such so I am going to da de da" and they actually move themselves on.* (Nola, p. 8)
Lecturer approachability	This is exemplified by lecturers considering students' perspectives, giving students choices in learning, valuing their online contributions, giving them time to be comfortable in the class, respecting students and responding to them in a reasonable timeframe.	*I try to step into the student shoes and see what would it be like for them looking in to find what's on their desktop and how can I make my thought processes transparent to them so they don't have problems with the site.* (Marge, p. 3)
Regular lecturer presence	Regular lecturer presence in monitoring, facilitating, and modelling course expectations is crucial in the online class.	*So to me that's absolutely critical, treating them* [students] *and their questions seriously and actually giving them worthwhile responses. So that does mean regularly being online … I know some people say "well, I'll be here on Tuesday, and I'll be there on Thursday", but that's a long time to wait if you put a question on a Thursday evening until the Tuesday and if it impedes what you're trying to do then it's a lot time to wait for a response.* (Marge, p. 7)

Holding clear philosophy of teaching and learning	Online lecturers need very clear views of teaching and learning before translating them into their practice. This is more crucial than in face-to-face classes.	*I think we have to pay attention to our immediate understandings of what learning is and the ideas of people like, like the Social Constructivists and Sociocultural theorists and the ideas of Communities of inquiry and this* [the online medium] *is just a facilitator of developing a community of inquiry and if you have that developed then learning will occur.* (Gerard, p. 21)
Considering the suitability of teaching-learning activities	Lecturers need to consider which course activities are better conducted for face-to-face versus online contexts.	*What we've tried to do is to figure out what are the things that are best for face-to-face and the things that can be taught online. The practice of building conversations need to be taught face-to-face, doing the readings and the processing of the readings can be done online.* (Jake, p. 2)
	There is also a caution against repeating face-to-face practices in online teaching (e.g. "shovelware", dominating discussions, merely having PowerPoint slides, using abstract discussion questions).	*We all evolve in how we go about teaching because when we did start we were very much "shovelware" sort of people. We almost transcribed our on-campus lectures and put them up there on the computer for people to sit and read our lectures but as time has gone by, we've found that isn't very effective.* (Basil, p. 5)
Being a co-participant and a listener in the class	Lecturers need to be willing to be a participant/co-learner/listener in the class in favour of a less hierarchical relationship with students.	*I try to encourage them* [students] *to think about the fact that in any of our online courses we are a learning community and that means we need to be sharing our ideas with one another and agreeing and disagreeing with one another but doing so in a respectful sort of a way… Every idea is accepted as a valid contribution to the community and if people disagreed with it, they will disagree with it respectfully and on grounds of good reason and so forth.* (Peter, p. 14)

Lecturers' managerial role

The second role highlighted was an online lecturer's managerial role in demonstrating an ability to plan, structure and manage the course. This ability is deemed more crucial to the success of an online class compared to a face-to-face class due to the constraints of the online environment such as delayed communication (in asynchronous forms of communication) and the lack of physical cues in communication. It is exemplified through the following strategies:

- Establishing a clear course layout and structure – setting up appropriate online folders to organise information (raised by seven lecturers), having minimal levels of embedded information in the course (raised by six lecturers, seven students) and helping students to find their way easily in the course(raised by five lecturers),

- Clear course planning strategies – organising and planning carefully for their course (raised by six lecturers), and stating expectations and instructions clearly for students (raised by four lecturers, 12 students),

- Allowing for student feedback (mentioned by nine lecturers, six students),

- Encouraging collaboration in student groups (reported by seven lecturers, seven students),

- Ensuring coherent links between course components (i.e. course readings, discussions, assessments) (commented by six lecturers, eight students),

- Assessing students' online participation (reported by eight lecturers, five students),

- Including a supplementary face-to-face session in online courses (raised by 11 students),

- Structuring thematic modular courses (reported by six lecturers, three students),

- Having smaller formative course assessments (raised by seven lecturers), and

- Regularly updating the course (highlighted by four lecturers).

Table 4 details each strategy and provides examples of illustrative quotes.

Table 4.   Participants' Perception of Useful Course Management Strategies

Strategies	Descriptions	Illustrative Quotes
Establishing a clear course layout and structure	Lecturers need to structure their online classes very clearly in a user-friendly manner for students to follow.	*Whereas in the online environment, I find you've got to be a lot more structured and thoughtful about that then, you have to do more pre-planning, more thinking ahead on that than you do in the face-to-face environment ... to keep as open ended as possible too but highly structured.* (Peter, p. 19)
	Strategies used include: - set up appropriate folders to organise information, and - provide a clear layout for students to find their way easily	*When people come into my online classroom, they should have a very clear picture of, just like you would walk in to a regular classroom and say "oh there's the notice board, oh my gosh there's a filing cabinet with a lot of resources, there's the teacher's area, there's the this, that or the other"... we are familiar with those environments.* (Nola, p. 6)
Clear course planning	Online course planning and preparation requires that lecturers be: - organised and have planned very carefully for their course, and	*Yeah you can't "wing" it ... sometimes in terms of my teaching I usually try to be prepared and you know I can go with the general concept of what I'm wanting to discuss or talk about, but I can go with the flow and I can see what the group's doing ... You can't do that on this online medium. You just can't do that.* (Lesley, p. 5)
	- very clear in their expectations and instructions for students.	*Accept that you do have to be much more structured and be very, very crisp and clear in what you say in an online environment.* (Peter, p. 18)

Allowing for student feedback	Online lecturers need to listen carefully to student feedback to improve on their course and teaching.	*I think students should have choices and I always put in if you want discussion topics it has to be considered, please let me and we will incorporate that. (Marge, p.13)*
Encouraging collaboration in student groups	Online lecturers need to group students in appropriate numbers and composition based on their gender/interest/geographic location to encourage their sharing of experiences. Such group dynamics require a minimum number of students to generate the necessary constructive level of discussion.	*The size of the group is very important and I know from my own research about 10 to 12 is max ... How are you going to select them – gender, age, geographical location, teaching experience. You need to think about all those sorts of things. (Nola, p. 8)*
Ensuring coherent links between course components	Online lecturers need to link and balance the course components, i.e. the course readings, discussions, and assessments, coherently and purposively to enable students to see the "big picture" and relevance of participating in the course.	*You have to be prepared to, I think, think about things in a different sort of a way so that the components are coherent. So that your technology, your reading and your practical work actually do fit together coherently. (Marge, p. 11)*
Assessing online participation	Lecturers need to give incentives for students to participate in the online discussion.	*Online learning will only work, or people will only take advantage of online learning media, if there is a kind of a pay off or purpose to what is going on. And again this requires a strong participation, and preferably a participation within a community of other learners .... whatever they are doing on the Net has a kind of a purpose ... unfortunately the purpose ultimately for students boils down to assessment, very much so. (Gerard, p. 4)*

Including a supplementary face-to-face session	It is helpful to include a face-to-face session early in the semester as a supplementary meeting to enable students to meet with the lecturer and their peers.	*I personally found the on-campus sessions helped as well, helps you get to know the lecturer, get to know how they speak. Even though you are talking online, it still helps with the tone of things. (Jezebel, p. 3)*
Structuring a course modularly according to themes	Lecturer needs to organise their online course into modules with specific content themes.	*You get a manageable number of modules in that they are reasonably well shaped and structured so that they've got their own internal logic ... people can see what they're doing in this module and where it's leading, where it's going.* (Peter, p. 2)
Having smaller formative course assessments	Online lecturers need to structure online class assessment to have formative or smaller assignments throughout the term to ensure students are following the course.	*I've tried to make the assessment task smaller usually with one large assignment and with smaller ones. The larger assignment is like a conventional university essay but what online learning has also made possible are smaller pieces of assessment that can be completed more quickly, sent more quickly, returned more quickly and, therefore, students get a quicker sense of their progress in the course in smaller chunks.* (Jake, p. 6)
Regularly updating the course	It is important for lecturers to update their course regularly throughout the term or at the end of the term to be prepared for the next term.	*If I have taught the course before, while I am teaching it, I am always updating it for the next time.* (Nola, p. 5)

Lecturers' social role

The online lecturers' social role is perceived through two strategies:

- Providing clear guidelines and expectations for student contributions and participation (reported by nine lecturers, 10 students), and

- Teaching and modelling good online communication practices and "netiquette" (raised by five lecturers, four students).

These strategies were said to be important to establish a friendly tone and welcoming class environment in order to encourage student participation.

Peter discussed the importance of having clear criteria for student participation:

> I give them criteria for what their discussions need to be like. And then they know that they're going to be assessed for that. So that places much higher value on that than if I'd said all the marks in this course just come from the formal assessments. I'm actually saying, no, they don't just come from the formal assessment, they also come from the way that you engage with and do your work on the module as you go through. (Peter, p. 11)

Kara felt the clear guidelines were necessary to maintain a safe environment for her learning:

> … make sure guidelines very clear on what contributions look like, e.g. number of words, linking to literature, how to do a contribution, what does it look like, how do I know it is a safe environment, who is going to be looking, etc. (Kara, p. 8)

Other strategies such as modelling a welcoming and friendly tone in the class discussions were important in Marge's class for students to engage one another in a more constructive manner.

> Some of the language that we use is very important and that may sound stupid but sometimes just getting something so that it's as you're talking not as you, not lecturing so sometimes when it can be very informal and there are other times when formality is better required. (Marge, p. 12)

A student, Yanni, reported a negative example when good netiquette failed to be practised:

> The tutor would use capital letters to emphasise things and kept repeating reminders. Capital letters gave the impression that the tutor was upset with us ... like a "computer violence" type of thing and interfered with [the] student-tutor relationship. (Yanni, p. 4)

Lecturers' technological role

The final role, a lecturer's technological role, is depicted through three strategies:

- Supporting students' adoption of the web-based technology (reported by eight lecturers, five students),
- Having some basic technological skills and interest in online teaching (raised by six lecturers), and
- Being aware of the technology's affordances and constraints in order to use them effectively in their teaching (discussed by six lecturers, 10 students).

Nola found supporting students technically was important for their learning:

> Students will say to me "Oh I am going to have to pull out of the course, you know. I hardly can use the computer, I don't know what I am doing ... I'll say "OK Elsie let's look at what you can do. You can turn on your computer, you can get online, you can load this … you can leave me a message … that's 14 steps to that point. What is it that you can't do?" And, of course, there is nothing that she can't do but being able to value those steps. (Nola, p. 5)

Marge felt it important to consider students' technical limitations to ensure students were participating equitably:

> I think if you think about things from a learners' perspective you recognise that some of the small communities, their access to technology is pretty unstable, they're not well served by Telecom lines and that sort of thing. (Marge, p. 10)

Finally, Peter exemplified how he exploited the affordances of the technological tools in his online class to support students' learning:

> I set up the FAQ and the Can Anyone Help to cut down the number of times the students come to me directly .... I've even set up buddy systems in some courses, so that they check it with a buddy first before it comes to me, but if it comes to me, I respond straight away, usually within 10-12 hours anyway. (Peter, p. 19)

Lecturers and students concurred that the strategies, practices and responsibilities required of an online lecturer is complex and can be addressed by considering pedagogical, managerial, social and technological roles in facilitating successful learning.

DISCUSSION

The study reported is a response to concerns that online distance learning initiatives are often driven by a technicist approach rather than a careful consideration of the issues involved in engaging students in deeper and more meaningful learning. It obtained lecturers' and students' perspectives on the qualities and characteristics of successful online learning environments to clearly reveal that successful online learning environments go beyond a technicist approach to teaching and learning. Importantly, there was overall concordance between the lecturers' and students' perspectives on the nature of effective online learning and how they thought successful learning experiences can be facilitated in online environments.

The study's findings established that online learning is a social and interactive process as embodied by participation in a learning community. For such a community to develop, its members need to be considerate, respectful and supportive of one another, share ideas to develop their discussions, and be willing to learn from one another in the class. These findings corroborate that of other researchers who adopt the development of online learning communities as an approach to support the social and participative learning practices highly valued by most students (Luppicini, 2007; Palloff & Pratt, 1999).

In order to develop a learning community, lecturers need to adopt four key roles. These are pedagogical, managerial, social and technological roles (Berge, 2000). An online lecturer's pedagogical role refers to the lecturer initiating strategies to promote quality learning interactions. A managerial role revolves around activities that are organisational, procedural and administrative in nature. A social role looks to promoting a friendly, social and welcoming environment for students. Finally, a technological role involves the lecturer becoming competent with using the web-based technology and supporting novice online students' adoption of the technology in order that they can concentrate on the learning activities in the course. Findings from the study indicated that lecturers and students differed in their emphasis of the pedagogical and managerial roles. Lecturers were concerned with a pedagogical role, highlighting their priority for facilitating discussions and encouraging quality student interactions as part of developing a learning community. Current studies attest to the importance of this role (Balcaen & Hirtz, 2007). As Harasim (2000) contends, online lecturers "must learn to moderate, mediate and facilitate discussions" (p. 53). Students, on the other hand, accorded a higher priority to an online lecturer's managerial role. This could be due to students' concern for completing the necessary course requirements in order to pass the course or the fact that their lecturer's pedagogy is effective and not a concern for them. In general, by considering these four roles, lecturers can adopt and switch in-between them at any one time in order to address, manage and support the diversity of learning needs in the class (Heuer & King, 2004). While each role is important, they are also important as a whole to portray the complex responsibilities and interactive involvement in bringing about the mutual shaping of goals, identities and transformation in participation in the learning community.

The findings imply that adopting a framework on lecturer roles can be productive to systemise the overall responsibility, tasks and teaching practices required of an online lecturer in order to facilitate successful teaching-learning experiences (Bonk & Dennen, 2003). Identifying specific roles enables lecturers to more easily consider and act on each role's required responsibility, tasks and practices and adapt them to a particular teaching context. Such a framework serves as a useful tool for supporting novice online lecturers in developing their courses and considering the opportunities available to them to expand their practices. The framework also has the potential to assist more experienced online lecturers to reflect and refine their current online teaching-learning practices. They can reassess their roles to take advantage of the web's communicative and interactive affordances by encouraging students to value their interactions with their peers as an important learning resource. Such re-examination moves the lecturer away from conventional roles of teaching as instruction or telling to questioning, engaging in dialogue and meaning-making rather than transmission of content (Barab, Thomas, & Merrill, 2001).

Another implication of the findings entails the need for online lecturer development programmes to go beyond addressing technical aspects to consider the importance of the social interactive aspects of learning in online contexts. Tertiary providers will only provide an impoverished environment for learning if they merely encourage online lecturers to use the technology to deliver their online

classes in a technicist manner. Emphasis needs to be given to the process of online learning that is learning community oriented to motivate and excite lecturers on the potential of online learning. This can further encourage them to consider the complex relationships between the technology, pedagogy and students' learning in order to shape a successful teaching and learning experience.

In concluding, the following student quote accurately captures the unique nature and learning opportunities afforded by online learning environments. It exemplifies why online distance learning will continue to be a compelling alternative in tertiary education and reminds tertiary providers and educators to play a more considered and responsible role in upholding the quality of teaching-learning in online distance education.

> Online learning is very, very valuable. As a participant I feel [online learning] offers if not in some ways exceed the face-to-face learning environment offers because [of] the flexibility, because ... the community of learners you become is just as valuable as the ones in the classroom and ... that it opens up learning and possibilities for people who are outside the normal regions for learning of that nature. I love it. Wouldn't learn any other way. (Kara, student interviewee)

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[1] Nola passed away on 4 August 2005. She was one of the key members of the team that developed the MMP at the University of Waikato and had contributed significantly in promoting online learning initiatives in New Zealand.