Instructor Presence in Online Courses and Student Satisfaction

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Abstract

This case study explores the role of the online instructor and how they influence student satisfaction. While there has been a substantial body of literature on what impacts on student satisfaction when students study online, there is far less literature focussing on how the instructor mediates this satisfaction, in particular satisfaction related to quality of feedback and teaching. This case study addresses this gap by exploring the performance of two instructors across six fully online courses in a post graduate managerial leadership course. Course evaluation data (quantitative and qualitative) frequency and content of instructor postings, and social network maps were considered in exploring what influenced student satisfaction with feedback and quality of teaching in a fully online unit. The outcomes of the case study corroborate with what is beginning to appear in the literature, that is, the central role the instructor plays in influencing student satisfaction. The importance of teaching and social presence, driven by the instructor, appears to be an important factor driving learning quality. This has implications for recruitment and retention as well as for training and development of online instructors.

Keywords: online teaching, teaching and social presence, student satisfaction

Introduction

The use of online educational delivery in university education over the past decade has increased dramatically (Arbaugh, 2010) with most high quality institutions using learning management systems to supplement face-to-face tuition through to fully online educational delivery. But how does all this technology influence student satisfaction with online learning (Ellis, Ginns, & Piggott, 2009), in particular, perceptions of quality teaching and feedback?   In addition, how do different types of instructor involvement influence the students' overall satisfaction with feedback and quality teaching in an online course?

This case study examines the preceding question by exploring a range of data for a fully online post-graduate managerial-leadership course.   The question emerged from the investigator's desire to understand why student satisfaction varied in a course that was very stable in its design across several trimesters. The only variation that seemed to appear was related to instructor interactivity within the online course.

Studies which explore formal and informal instructor behaviours in online business education are needed. Few studies actually explore this area and little is known about the specifics of instructor interaction (Arbaugh, 2010; Bair & Bair, 2011). This case study, therefore, begins with the question, followed by a review of related literature on online learning, particularly centred on student satisfaction, feedback and the role

of the instructor. This is followed by a description of the methodology used to explore the question, and a discussion of the results with further literature considered to close the reflective loop.

Online Learning — Feedback, Student Satisfaction and the Instructor's Role

There is now ample evidence that learning online can be as effective as traditional forms of education (Ladyshewsky, 2004) and perhaps even superior in terms of learning outcome (Schachar & Neumann, 2010; Yuki Toyama, Murphy, Bakia, & Jones, 2009). The 'no significant difference' perspective between fully online learning and traditional face-to-face instruction is fairly well established, and research is now exploring what instructional strategies are most effective for online learning.

Previous studies exploring online learning have tended to focus on global outcomes and have not necessarily explored the unique ways of creating these positive outcomes (Baker, 2010), in other words, identifying best practices. Further, very few institutions have studied what factors influence online student satisfaction and learning outcomes (Eom, Wen, & Ashill, 2006). In one study, student satisfaction in a technology mediated versus traditional undergraduate management course was measured (Piccoli, Ahmad, & Ives, 2001). The students in the technology mediated course had significantly less satisfaction, however, this was due to the experience being novel, and many had not developed the type of learner control and competence necessary in online learning. This research, however, was at the infancy of online learning, and many of the factors such as hardware and software reliability, computer usability, connectivity, and user competence have improved substantially making this less of an issue.

Providing feedback in an online environment also raises a number of challenges which are distinct from teaching in traditional classroom face-to-face environments. In the case of classroom feedback, this can be provided in different ways using informal discussions before or after class, when an assignment is being explained, through non verbal communication, and in real time (Getzlaf, Perry, Toffner, Lamarche, & Edwards, 2009). This can be more challenging in an online course, but can still be replicated. Communication, however, is often asynchronous and lacking in non-verbal richness unless more advanced technologies which enable synchronous audio-visual transmission are employed. These more advanced technologies allow online instructors to replicate many of the methods used in the classroom.

Teacher immediacy in providing feedback is also an important factor in student satisfaction. While research suggests positive relationships between instructor presence and student satisfaction, further research is needed in the online teaching environment to substantiate this further (Baker, 2010). In teaching online MBA students, for example, student satisfaction with their online learning experience was contingent on managing participation, determining an optimal class size for online delivery, preparing instructors to act as facilitators in discussion rooms, and creating course structures and grades that encouraged engagement (Brower, 2003). The personal contact between students and the instructor are key factors influencing a student's perceived satisfaction with their learning. However, 'instructor to student' over 'student to student' interaction was found to be the most significant variable influencing student satisfaction in a survey of online students (Marks, Sibley, & Arbaugh, 2005).

Garrison and Vaughn provide a framework that assists in understanding the nature of this interactivity in online courses (Garrison & Vaughn, 2008). Three components are described in this framework and include social, cognitive, and teaching presence. Because of lack of a physical presence in online classes, building a community is important to heighten participation and motivation to learn. Both the instructor and the students can create social presence through welcoming and acknowledging one another, sharing information about one another, and providing supportive comments about discussion posts and questions. Evidence suggests that online classes can be designed in such a way that students' satisfaction rates regarding perceptions of social interaction are similar to a classroom (Hostetter & Busch, 2006). Cognitive presence, in contrast, involves constructing and confirming meaning through critical conversations and reflection (Garrison, Anderson, & Archer, 2000) that are often facilitated by the instructor. Cognitive presence is linked to perceptions of learning. Teaching presence requires the instructor to provide a balance between the two former frameworks so the online course does not become a social setting or an inflexible programmed course of instruction. Teaching presence includes how the design and organization of the course has been laid out, how it is facilitated and how much direct instruction takes place. Balance is needed as excessive teaching presence by the instructor (e.g. a large number of postings in discussion forums) can reduce student satisfaction due to the extra reading work it creates within a course, particularly at a post-graduate level where it can fuel a litany of responsive postings (Arbaugh, 2010). Building a course in digital format requires instructors to think through the process, structure, evaluation and interaction components of the course prior to its delivery (Anderson, Rourke, Garrison, & Archer, 2001). Instructors can be more explicit, deliberate, and transparent in the design process in order to convey a sense of instructor social and teaching presence from the onset of the course.

In the case of feedback, students often consider 'feedback' to be the grade and verbal/written comments received by an instructor for their performance on an assigned task. Earlier research on educational feedback focussed on the summative information provided to students by the instructor for task and assignment work (Butler & Winne, 1995). Summative feedback has less of an impact on a student's self-regulating behaviour than feedback provided throughout the learning process (formative feedback). Through formative feedback, the instructor informs students how well they are achieving the educational targets and this is more likely to influence student learning. This feedback should direct the student's learning efforts. In an online environment this formative feedback process can be managed by having specific question and answer discussion forums which focus on assignments and course issues, sending individual emails, and adding postings about overall class performance in discussion rooms (Eom, et al., 2006). The use of virtual classroom technology such as Blackboard Collaborate or SKYPE group conferencing offers expanded ways of providing feedback to students, before or after assignment submission, similar to the traditional classroom.

The provision of feedback is not a straightforward process. It is complex and outcomes are influenced by student, instructor and course design factors. Readers wanting more in depth information on this concept are encouraged to read a comprehensive review by (Butler & Winne, 1995) on this topic. The focus of this case study was to explore the impact of the instructor on student perceptions of quality teaching and feedback in an online course. This is becoming an important question in the current higher education sector (De George-Walker & Keeffe, 2010). Universities

are becoming more accountable to students, to governments who provide funding and to accreditation bodies for the quality of their courses (Millson & Wilemon, 2008). One common measure of this accountability is student satisfaction, which is typically measured by a course evaluation survey at the end of the student experience. A series of questions are usually asked of the students and they usually rate them on a categorical scale from strongly disagree to strongly agree. Feedback is often poorly scored, particularly in online courses, partly because students may not recognise that they are receiving feedback, and instructors may not understand how to provide this effectively and overtly in online courses. Student perceptions that feedback is of a poor quality, most likely, will influence satisfaction scores related to the quality of teaching.

Student Satisfaction
A range of studies have identified key factors that influence student satisfaction in online courses but very few have focused on the key content and process aspects of providing effective feedback to students who study online (Getzlaf, et al., 2009). Constructive feedback is valued by students who study online (Mancuso-Murphy, 2007) particularly when it is immediate (Arbaugh, 2010). In one study, for example, investigators found that prompt feedback was a significant predictor of student perceived learning and satisfaction (Arbaugh & Hornick, 2006). Further, Lang & Costello found a range of factors that influenced student satisfaction with their learning experience in discussion boards (Lang & Costello, 2009).

They found obvious factors such as student, instructor, content and design, and social dimensions.

- Student dimensions related to anxiety levels, attitude towards learning and learning styles.
- Instructor dimensions related to teaching and moderation style and timeliness and comprehensiveness of feedback.
- Content and design dimensions were related to the material contained within the online course and how well designed and media rich the resources were.
- The social dimension was related to the level of engagement and interactivity in the online community.

Other studies also support these factors in influencing student satisfaction with online learning (Piccoli, et al., 2001; Sun, Tsai, Finger, Chen, & Yeh, 2008) and also note the importance of the instructor's attitude towards online learning as an important factor in shaping student measures of learning effectiveness. In fact, it has been noted that the instructor's positive attitude towards technology, their interactive teaching style and control over the technology were important factors contributing to learning effectiveness (Baker, 2010). In research on nearly 300 students in online learning courses, a positive instructor attitude towards online learning was a significant predictor of course satisfaction (Sun, et al., 2008).

The literature appears to indicate that the role of the instructor is an important factor influencing student satisfaction (An, Shin, & Lim, 2009; Bair & Bair, 2011) and student perceptions of learning (Arbaugh, 2010). The role of the instructor is also not just limited to academic discussions. E-moderation, as it is called by Ellis and colleagues, not only includes involvement in academic discussion, but feedback from

the instructor on class activities, submitted work and communication that keeps students informed on matters relevant to their learning (Ellis, et al., 2009).

In a small qualitative study of 30 fully online students in a health related graduate course (Getzlaf, et al., 2009), the researchers' thematic analysis of effective instructor feedback concluded that feedback is a mutual process involving both students and the instructor. It was described as constructive and built confidence in the students. Further, it was explicit in identifying expectations through coaching and was timely and had set time frames for delivery. Feedback was heightened by making it more personalised so learners realised that their comments had been read. It was also not a top down process but a mutually negotiated and evolving process which involved a shift in power between instructor and students.

The literature is very strong in suggesting that interactive instructional design, as well as course quality, ease of use and usefulness of the material is imperative for user satisfaction in online learning (Sun, et al., 2008). Students who reported high levels of interaction with instructors and peers, for example, reported higher levels of satisfaction and learning (Swan, 2001) as this most likely provided them with feedback on their own progress and learning, particularly if the conversations challenged their thinking and heightened their cognitive monitoring (Chen, 2002). Students appear to perceive that learning is taking place from the amount and depth of discussion that is actually taking place (Graham & Scarborough, 2001; Picciano, 1998; Swan, 2001) as it provides students with feedback on their learning and elevates their understanding towards achievement of learning outcomes.

In another study, researchers investigated the determinants of students' perceived learning outcomes and satisfaction in university based asynchronous online education programs (Eom, et al., 2006). Using data from 397 responses and structural equation modelling, they found that instructor feedback, student self-motivation, degree of interaction, and instructor knowledge and facilitation were some of the factors significantly related to student satisfaction. Most noteworthy was that instructor feedback was significantly related to the achievement of learning outcomes, even in poorly designed web content design.

Case Study Question and Methods
The literature appears to suggest that there is a relationship between the instructor and student satisfaction with quality of feedback and teaching. In the researcher's institution, a comparison of post-graduate business student course evaluation scores across 25 fully online and face-to-face classes revealed a lower level of student satisfaction for 'feedback' and 'quality of teaching' in the fully online courses, even though the courses were comparable in content, assessment and proposed learning outcomes. This apparently is not uncommon even though attempts to understand and manage this quality issue through staff selection, training and monitoring take place (Bair & Bair, 2011).

In a theory and practice based post-graduate course focussed on developing leadership and management skills, the author and investigator, who was also the course controller, was frustrated by variable levels of student satisfaction with course feedback and quality of teaching. In particular, the lower ratings received in the online course as compared to the face-to-face version even though the content, learning outcomes and assessment were comparable across the two modes of study. The online course design followed many of the recommendations noted in the

research in terms of course design (Lang & Costello, 2009; Piccoli, et al., 2001) and is considered a 'best practice' example in the University. For example, the content was highly structured in a modular format. Navigation was simple and there was rich media content to support learning. Asynchronous discussion rooms were available for set topics (which were graded) as well as for free discussions. There were question and answer discussion rooms as well as discussion rooms for communication about assignments. The two instructors who taught the course online engaged with the students in the set discussion topics, as well as answered any questions in the other rooms. What piqued the researcher's interest, however, was how instructor 'feedback' frequency and interactivity appeared to be linked to student satisfaction and quality of teaching?

To what extent, then, is instructor involvement necessary to achieve an adequate student satisfaction outcome in the areas of 'feedback' and 'quality of teaching'? This question is the focus of this case study, which supports calls for more specific explorations of instructional design methods in online learning, in particular, conduct factors (Arbaugh et al., 2009). It has been stated that the role of the instructor has been neglected in much of the online education research, and this case study attempts to explore this phenomenon further (Bair & Bair, 2011).

The process used in this case study can best be aligned to an approach which involves the instructor in an ongoing process where teaching practices are examined, with the goal of self improvement (Loughran, 2002). In this case study, changes in the instructors' interactions with students, instructor postings, student satisfaction data, qualitative comments from student satisfaction surveys and discussion boards, student grades, and social network maps were explored. Case studies have been gaining popularity in education, and in particular, educational evaluation (Stake, 1995).   A self study approach was the focus, but not necessarily the methodology, as a range of data sources were used to interrogate teaching practice (LaBoskey, 2004). A case study is an ideal methodology when a holistic, and in depth analysis is needed to bring out details from the perspective of the participants. Yin describes four applications for case studies, one of which is applied here (Yin, 1994). In this case study, exploring complex causal links in real life interventions was undertaken using a range of quantitative and qualitative data to better understand the role of the instructor in influencing student satisfaction indicators in an online course.

Construct validity in a case study is carried out by using multiple sources of evidence (Yin, 1994). Evidence can come from documentation, archival records, direct observation, and/or participant observation. Case studies may also be studied in a number of ways, quantitatively or qualitatively, or a mixture of both and are intensive in that they examine the course of analysis in depth, bringing in rich data and exploring variance (Flyvbjerg, 2011). Eysenck originally saw the case study as an exploration as noted below and provides an excellent reason for this case study undertaking as a scholarship of teaching and learning initiative.

> "sometimes we simply have to keep our eyes open and look carefully at individual cases – not in the hope of proving anything, but rather in the hope of learning something!" (Eysenck, 1976) page 9.

For this case study, feedback was defined as information provided from instructors to students about course activities. Feedback included both objectivist product oriented information (eg. written comments on assignments) and constructivist process oriented information (eg. suggestions to improve online postings)" (Getzlaf, et al.,

2009; Hummell, 2006). It also included postings to assist and guide students through their study along with constructivist feedback on the peer coaching process employed in the course.

The course, which covers general theories and principles of leadership and management, as opposed to a more quantitative class like finance or economics, was delivered fully online, in trimester periods of 14 weeks duration, with class sizes averaging around 35 students. The course, which involved learning theories, completing self-assessment tools, and engaging in peer based leadership coaching were the same throughout the data collection period. The assessment also did not vary. Two different instructors were involved in teaching the course. One of the instructors was the controller and had overall responsibility for the course. The other instructor was a sessional lecturer, who worked closely with the controller, but managed the online unit independently when teaching.

Students who enrol in the course, for the most part, work full time and study part time, usually taking one course per trimester. The average age of the student would be early to mid 30s with a mix of backgrounds in the private sector, the public sector, health, and engineering and mining. The gender ratio was 60 to 40 percent male to female and students were competent in using the learning management system. Information to assist in the case study analysis came from several sources which are described below.

Student Satisfaction Data
Student satisfaction data was collected using the university's standardized course evaluation system (Oliver, Tucker, Gupta, & Yeo, 2008). The course evaluation survey had 11 quantitative items and two qualitative items. The items asked students to indicate their level of agreement. Students could indicate Strongly Agree, Agree, Disagree, Strongly Disagree or Unable to Judge for each item. Survey questions one to seven asked students to report on what helped and hindered their achievement of course learning outcomes. Items five and seven, described below, are of specific interest in this case study. The remaining four survey questions asked students to report on their motivation, enthusiasm and commitment to the learning experience and their overall satisfaction with the course. There are also two qualitative questions which ask, "please comment on the most helpful aspects of <course name>", and, "please comment on how you think <course name> might be improved?"

> **Item 5:** Feedback on my work in this course helps me to achieve the learning outcomes. (Feedback includes written or verbal comments on your work.)

> **Item 7:** The quality of teaching in this course helps me to achieve the learning outcomes. (Quality teaching occurs when knowledgeable and enthusiastic teaching staff interact positively with students in well-organised teaching and learning experiences.)

To measure satisfaction, students were given access to the survey three weeks prior to the end of the course. The survey was then left open for four weeks before it closed and collation of results occured. Students could evaluate their study experience at any time during this period. The survey was voluntary, and students were encouraged through a series of emails and notifications to evaluate their course learning experience. Students were not identified in the survey so their results were

anonymous. Because of the anonymous and voluntary nature of the student satisfaction survey, and several requests by the instructor for constructive feedback, it is likely that those students who wanted to provide constructive feedback (positive or negative) made the initiative to do so.

Once the survey was complete, the controller of the course receives a full report including quantitative and qualitative comments. The response rate for the survey was reported along with the percentage agreement/disagreement for each quantitative question. The university sets a quality benchmark of 80 per cent agreement, with 'agree' and 'strongly agree' scores combined, as the standard sought in the evaluation. The student satisfaction survey data was one of the qualitative indicators used to understand more deeply the impact of instructor presence and quality of teaching and feedback.

Academic Grades
The mean grades across the study periods for each student cohort was also collected to gain a full picture of student satisfaction and their perceptions of quality of teaching. Differences in the mean grades across study periods could have an impact on student satisfaction scores, for example, a lower scoring cohort expressing anger by being more negative on a survey.

Instructor and Student Interactivity
To measure the degree of interactivity between students and the instructor, the sum of postings in each of four discussion rooms was tabulated at the end of each course. The first discussion room was a question and answer feedback forum which focussed on anything related to the course and assignments. The remaining three discussion rooms were related to specific academic course topics and were each open for contributions by students and the instructor for two weeks. These three discussion rooms and the contributions posted by students were graded by the instructors. The total number of student postings, and the total number of instructor postings were counted and a ratio calculated. Instructor postings were also collected from the discussion rooms and compared against definitions of teaching and social presence.

Social network analysis was also used to explore interactivity in one of the study period's discussion rooms as evaluation results during this period (study period 6 – see table 1 below) were very high. Social network analysis is a technique that can be applied in building maps that allow analysis of networks (Chan & Liebowitz, 2006) and how individuals interconnect with one another. To enable this exploration, specific software called (SNAPP
http://research.uow.edu.au/learningnetworks/seeing/snapp/index.html), which became available to the investigator during this study period was utilised. This software program, which integrates with Blackboard, allowed the instructor to create a social network map for SP 6.

Results and Discussion

Table 1 provides a summary of student satisfaction data that was captured over the course of the case study analysis. At the end of each trimester, the data was captured to map out differences in student satisfaction results. The first two rows of table 1 provide a summary of the number of students who responded to the evaluation survey and the response rate. The third row provides the mean grade for each study

period, which was the average of their two major assignments. The next section of table 1 reports the percentage agreement for all of the 11 course evaluation items in the survey. The rows for items 5 and 7 which focus on feedback and quality of teaching are shaded as these items are of specific interest in this case study as they are the hardest to achieve an 80 percent agreement result. The last line denotes which instructor was teaching the course at the time.

The response rates for all study periods exceeded 50 per cent except for SP 5 which was only 43 percent. It was not clear why the response rate for this particular study period was low although there were some reported problems with the electronic survey in that study period at the University level. Given that the course material was the same across all study periods, it is interesting to note that item nine for SP5 was the lowest rating across all of the study periods in terms of 'making best use of the learning experiences in the course'. This may suggest an outlier group, or a cohort that was perhaps less motivated than the other cohorts on average. For example in one study exploring student satisfaction and social presence using structural equation modelling, the researchers found that interest impacts social presence and satisfaction directly (Leong, 2011). It is not uncommon to sometimes experience a lack of student motivation in the internet learning arena, with students focusing instead on their personal experiences and not engaging in full participation (Marks, et al., 2005). Learner attitude towards online learning is an important factor in e-learning (Arbaugh & Duray, 2002) and may explain the measures for SP 5. A more positive attitude towards online learning will influence satisfaction (Piccoli, et al., 2001). This may also explain the lowest overall satisfaction outcome for item 11 for SP 5.

Table 1. Evaluation Survey Results and Academic Grades by Study Period

Study Period (SP)	SP 1	SP 2	SP 3	SP 4	SP 5	SP 6
Number of Responses/Course Enrolment	23/36	18/35	15/26	16/25	10/23	19/31
Response Rate	64%	51 %	58%	64%	43%	61%
Mean Grade (2 Major Assignments)	76.2	73.6	72.9	75.2	75.1	73.8
Percentage Agreement with Each Evaluation Item						
1 - Learning Outcomes (LOs) Clearly Identified	93	100	93	100	80	100
2 - Learning Experiences Help Achieve LOs	86	78	100	100	70	100
3 – Learning Resources Help Achieve LOs	100	78	93	100	70	95
4 – Assessment Tasks Evaluate Achievement of LOs	71	78	87	100	90	100
5 – Feedback in Course Helps Achieve LOs	79	53	80	100	60	95
6 – Workload in Course Appropriate to Achieve LOs	71	72	87	81	67	100
7 – Quality of Teaching Helps Achieve LOs	64	61	80	100	50	100
8 – Am Motivated to Achieve LOs	86	78	80	100	80	100
9 – Make Best Use of Learning Experiences in Course	79	78	87	88	60	100
10 – Think About How Can Learn More Effectively	79	78	87	91	80	100
11 – Overall Am Satisfied with Course	93	78	93	100	70	100
Instructor	1	1	2	2	1	2

The mean grade was similar across all trimesters which suggests that all of the students, on average, were able to achieve the learning outcomes to a satisfactory level and that the learning experiences, resources and assessment tasks were effective enough in allowing the students to achieve the course learning outcomes.

The results in terms of percentage agreement with the 'agree/strongly agree' rankings are reported for the 11 questions across the sequential study periods. As noted earlier, 80 per cent 'agreement' is the University standard. The data appears to illustrate an instructor effect. That is, where instructor 1 delivered the course, items 5 and 7 on the evaluation survey were below the 80 percent University standard whereas for instructor 2, these met or exceeded this standard. For the most part, instructor 2 had higher student evaluation scores than instructor 1 on most measures in the survey. This piqued the interest of the investigator and led to an analysis of instructor frequency in postings.

The first section of table 2 below provides frequency data on the number of instructor and student postings by study period. Section 2 of table 2 provides the ratio of instructor to student postings, along with the instructor that was teaching the course,

by study period.

Table 2. Instructor and Student Posting Frequency and Ratio by Study Period

Section 1: Instructor and Student Posting Frequency						
Feedback Forum: Number of Instructor Posts	38	50	106	69	28	72
Feedback Forum: Number of Student Posts	73	60	174	99	19	60
Discussion 1: Number of Instructor Posts	11	16	8	37	11	39
Discussion 1: Number of Student Posts	124	159	118	112	95	159
Discussion 2: Number of Instructor Posts	6	9	7	25	14	26
Discussion 2: Number of Student Posts	134	148	114	118	106	125
Discussion 3: Number of Instructor Posts	4	9	7	24	13	25
Discussion 3: Number of Student Posts	99	167	110	106	109	134
Section 2: Total Instructor Posts / Total Student Posts						
Feedback Percentage Ratio (FPR)	13.7	15.7	24.8	35.6	20	33.8
Instructor	1	1	2	2	1	2

On examining table 2, instructor 1 generally had fewer postings in comparison to instructor two. Further, when the feedback percentage ratio of instructor to student postings was calculated, instructor 2 had a larger ratio. Instructor 1 had a ratio that ranged from 13.7 to 20 whereas instructor 2 had a ratio that ranged from 24.8 to 35.6. Interestingly, the higher feedback percentage ratios of instructor 2 are matched by higher student satisfaction scores on items 5 and 7 in table 1, and meet the University standard of 80 percent. When the feedback percentage ratio was 20 or less, as was the case with instructor 1, the student satisfaction scores on items 5 and 7 in table 1 were less and below the University standard of 80 per cent agreement. This pattern that emerged was interesting to the researcher and moved them to investigate possible reasons for this emerging pattern, a pattern which seemed to manifest across most of the course evaluation survey items.

The researcher then explored the nature of comments being made by the instructors to see if there was a qualitative difference, particularly in relation to social and teaching presence as research suggests a strong relationship between social presence and student satisfaction with their learning in the course (Hostetter & Busch, 2006). What follows is an example of a typical instructor 1 post. It offers feedback on the student's post and would align with teaching and cognitive presence.

> "Some very good points in your post about 'asking questions' and differentiating your coaching when dealing with younger versus older staff and different experience levels. Your description describes a manager who values learning on the job."

Instructor 2 postings, in contrast, offered posts which would also be considered teaching and cognitive presence. However, there is more personal sharing from the

instructor, acknowledgement by name, and expressions of gratitude. Hence, instructor 2 tended to also exhibit more social presence.

> "Hi Mary (student pseudonym) and others.....The one part of the model I don't like is step 3 - giving feedback. You all may recall some of this discussion from the i-lecture and how giving feedback puts you into an evaluative perspective....which changes your power ... Thanks for the post, it was good in drawing out some of my thoughts which I might not have divulged to all about coaching practice."

> " You made a very good point about trust in a 'manager as coach' relationship and the fact that sometimes, managers, don't get to choose their staff. ... We can have compassion for our direct reports and co-workers, even though we don't choose them. Having compassion, or basically caring about your staff, will produce all sorts of signals within your team. ... I remember a great story on TV about the Captain of a Women's Basketball team. It was very clear that she didn't like her coach from the way she talked about him, however, she had great respect for him (compassion). ... Good post, very rich conceptually. Thanks."

Research by (Leong, 2011) recommends that instructors facilitate interest and emphasize the importance and relevance of online material along with immediate responses as much as possible with good social facilitation skills. This appears to heighten student satisfaction within a course. Interestingly though, posting frequency by itself cannot be construed as a sole measure to ensure student satisfaction. Research by Shea and colleagues, using social network analysis found that instructors with fewer postings, but more directive quality information that supported students, demonstrated strong teaching presence (Shea et al., 2010). It also generated considerable activity between the instructor and the students in comparison to instructors that posted more general but frequent information. They explained this phenomenon as 'prestige' rather than 'centrality in the discussion forums. Instructor 1 postings generally acknowledged a student's contribution and indicated that it was a good post. It occasionally offered the instructor's opinion and some additional content. For the most part, instructor 1 offered comments that would be considered teaching presence. Further, they exhibited more centrality rather than prestige. This was quite different for instructor 2 who offered more social presence, in addition to teaching and cognitive presence. The balance appeared to be right, as measured by increased student satisfaction on items 5 an 7 and overall satisfaction on item 11 in table 1.

To substantiate this, the qualitative comments provided the students about their instructor on the course evaluation survey were then explored. For instructor 1 the students appeared to evaluate them based on their teaching presence as is manifested in the first comment below. The lack of social presence in Instructor 1 is apparent in the second and third student comments below. Students wanted more social presence from instructor 1. Instructors often place more emphasis on the pedagogical role and less on the social role, and while students tend to be positive about this pedagogical support, they often have concerns about the lack of a social role (Arbaugh, 2010). This appears to manifest in comments related to instructor 1 which students made in the qualitative comments section of the student satisfaction survey.

> "The one aspect I wish to acknowledge is Mary's (instructor pseudonym) regular visits on blackboard and in particular her feedback on progress and

> discussions. I am now halfway through my MBA and Mary's interest and contribution really stands out compared to some others. "

> "I felt there needed to be more interaction with the teacher on a weekly basis. Each week there were recommended readings & lengthy online lectures reinforced through peer discussion boards yet given our inexperience I wanted more regular interaction with the teacher."

> "Some more interaction with lecturers on the discussion boards would help to engage students."

This lack of social presence is also seen in the quality of discussion posts by Instructor 1. The instructor is taking a very traditional teacher role (teaching presence) in the postings and the first quotation below is illustrative of their typical posts. The other type of posts, which were fewer, tended to be more focussed on cognitive presence as illustrated in the second quotation below. In this second quotation it remains impersonal, not acknowledging, for example, who posted the excellent examples.

> "Hi All, results posted with the excepton of a couple of late submissions…Specific detailed feedback is provided in feedback sheets attached to your results. General feedback: average grade is 74%, some individuals did not reference properly, please refer to referencing guide….Regards Mary (pseudonym).

> " Hi All, Resuls are posted for discussion one. Please note feedback below: Overall the level of quality of discussion one was good. There were a couple of excellent postings against which I posted comments to this effect. Basically we were looking for postings that were insightful, with analysis of your own experiences in relation to the available literature…. Regards Mary" (pseudonym).

The impact of teaching presence alone with some cognitive presence, as was the case with instructor 1, appears to have led to the lower student satisfaction scores regarding feedback and quality of teaching. The fewer postings overall by instructor 1 further compound this outcome.

For instructor 2 the students appeared to evaluate them based on their teaching, cognitive and social presence as noted in the comments below extracted from the qualitative comments section of the student satisfaction survey. This seemingly greater satisfaction with instructor 2 appears then to link with the stronger course evaluation data for this instructor seen in table 1, particularly items 5, 7 and 11.

> "I really enjoyed the discussions. John (instructor pseudonym) gave very encouraging and provoking comments in a respectful manner. I felt it was a very safe discussion environment."

> "The discussions were engaging … I enjoyed the facilitation approach to learning that John offered as the discussions encouraged out the combined knowledge of the diversely experienced students."

In examining the discussion postings of Instructor 2, the greater use of social presence is seen in how they communicate within the students. This increased use of social presence, is part of why instructor 2 has a higher number of postings in comparison to instructor 1. There is more acknowledgement, use of

first names when appropriate, a sense of being part of the community, and expressions of gratitude. As a result this greater social presence may be part of the greater student satisfaction scores related to feedback and quality of teaching because they engage and draw the students into the discussion.

> "Hi Tom and Jane (pseudonyms). May I add to the discussion on coaching at executive levels. If your looking at executives at the top of the food chain … is it appropriate to use internal coaching, particularly if people have eyes on higher level position.…Having said that, is internal coaching more appropriate for middle/junior levels? Others may have a view and I would be interested in hearing this? John (pseudonym).

> "Thank you for your posts. The coaching discussion room is now closed. Very interesting reading and nearly everyone had a story to tell about coaching in the workplace – positive and negative – which says a lot about the state of affairs of coaching and the Manager as Coach role. … I will be posting discussion grades today. Our next discussion… Best wishes, John (pseudonym).

In SP 6, two live virtual classroom sessions using Elluminate Live (now called Blackboard Collaborate) were added to the course by instructor 2 to provide greater formative feedback to students. Within this medium it is possible to increase the use of social presence, similar to a classroom environment, because of webcam and audio technologies. Two weeks prior to each major assignment, the instructor facilitated a one hour live discussion for all students to engage in questions about their upcoming assignment. This session was recorded and available for students who were not able to attend the session. This additional tool, which enabled Instructor 2 to increase their social and teaching presence in the course, appeared to have a strong influence on items 5 and 7 in the course evaluation survey in table 1. Further qualitiative indicators, extracted from the qualitative comments section of the student satisfaction survey also appear to support this greater level of satisfaction, as noted below.

> "Using the Elluminate software (virtual class technology) it became an interactive session rather than just watching a video."

> "…Elluminate LIVE sessions were equally as engaging and particularly helpful, adding a richness to the online learning environment.

However, more investigation is needed on using synchronous experiences in online courses and how this influences social presence (Bair & Bair, 2011) and student satisfaction to be able to make conclusive findings/remarks. In this case it appeared to have a notable impact.

Social Network Mapping

To understand what was occurring in the discussion forum with Instructor 2 and the students in SP6, a social network mapping tool was used to capture the interaction in the question and answer forum and one of the content discussions. These are represented as figures 1 and 2 respectively. In figure 1, the instructor is the central figure in the network map as virtually all questions and answers are fielded through this individual. The instructor in this situation is demonstrating teaching presence by answering questions from the students about their study. The instructor has centrality and prestige, which is appropriate as this individual has the knowledge to assist the

students to be successful. Figure 2 shows the instructor in the centre of the discussion as well, but there are also other central networks of individuals who have strong connections not only to the instructor but to other students. The social network map in figure 2 was enabled by instructor 2's social and teaching presence. The instructor did this by encouraging students to reply to other student posts, pointing to excellent posts, offering comments, posing new questions and acknowledging student contributions.

Figure 1. Instructor Interactivity in the Question and Answer Room Discussion Forum
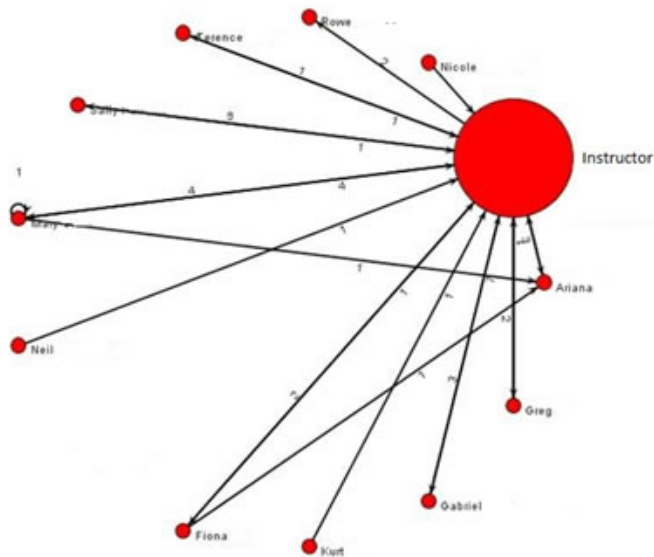
Figure 2. Instructor and Student Peer Interactivity in Coaching Discussion Forum

Coaching Discussion - Winners
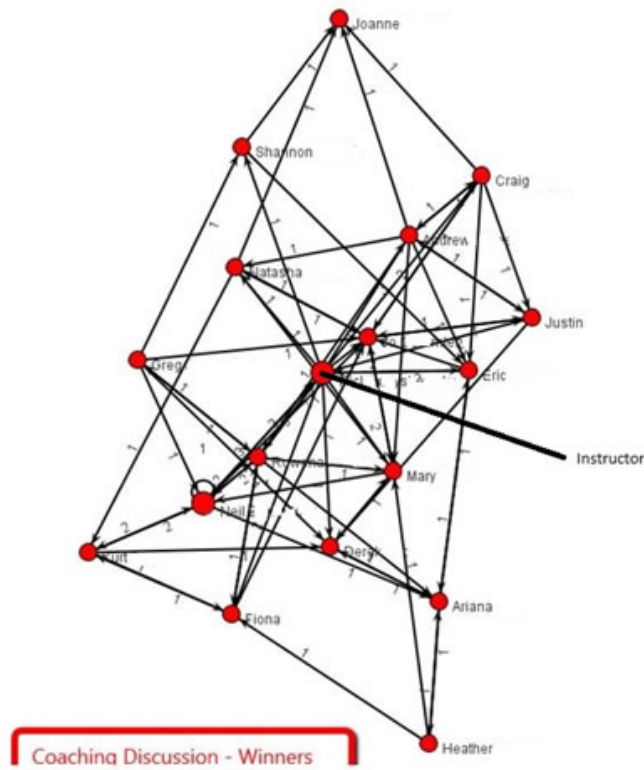
What this analysis revealed to the researcher and course controller is that creating the right balance in terms of presence can be challenging for instructors. This case study demonstrates two different approaches of instructor facilitation, and the impact it has on student satisfaction, in particular, feedback and quality of teaching. Research suggests that excessive instructor posting can reduce student involvement in discussion rooms (An, et al., 2009; Rollag, 2010) however, it does not necessarily follow that students' perceptions of their learning experience will improve if instructors are minimally involved (Mazzolini & Maddison, 2002). Students often perceive instructors who post often, as enthusiastic and possessing greater expertise, and this translates into higher levels of student satisfaction. Students themselves can also increase social presence within a course by increasing their interaction with one another, however, this type of interaction does not necessarily lead to higher levels of student satisfaction (Kim, Kwon, & Cho, 2011) but is rather mediated through cognitive absorption (Leong, 2011). Cognitive absorption is a deep engagement within the course software, and is derived from the theory of 'flow' (Csikszentmihalyi, 1990), which describes a state in which people are so involved in an activity nothing else seems to matter. Research has demonstrated that students with experience in online courses have specialised computer skills and understand how to work in a computer mediated environment more effectively. Hence, they understand the necessity to contribute to the learning community (Hostetter & Busch, 2006) and work seamlessly, much like a state of flow. Hence, the strong social presence created by students, promotes cognitive absorption, which in turn influences student satisfaction (Leong, 2011). However, increased social presence of the instructor also increases student social presence, and results in a stronger cognitive presence.

Increasing presence by the instructor also helps to reduce student frustration from perceptions that they are not receiving any feedback in relation to postings in asynchronous discussions. This then flows on to their perceived notions of quality teaching (Mazzolini & Maddison, 2002). Bair and Bair (2011) noted that students in online environments expect the teacher to be present in the course immediately and in multiple ways. Postings by an instructor may be the only way they know that the teacher is present in the course.

The social network map analysis is also supportive of the higher levels of presence seen in instructor 2. The map in Figure 2 demonstrates a highly integrated and collaborative shared space between many of the participants in the course, an important determinant in student satisfaction (Getzlaf, et al., 2009; Sun, et al., 2008). Using social network map analysis allows an instructor to see which students are highly connected to other students in the discussion room and those that are perhaps more peripheral and may need more encouragement. The instructor can then use their social and teaching presence to draw these students together. Course controllers can also undertake these analyses to determine how teaching staff are facilitating within an online unit, and offer coaching or training where appropriate.

Summary

Very few institutions have explored what factors influence online student satisfaction and learning outcomes (Eom, et al., 2006) from the perspective of the instructor. In a summary of research on participant interaction online, researchers suggest that learner-instructor interaction is one of the strongest predictors of student learning and delivery medium satisfaction and may, in fact be the primary variable for predicting online course learning outcomes (Arbaugh, et al., 2009). It appears that increasing the number of instructor postings related to teaching and social presence, as seen in this case study in instructor 2, have a positive impact on student satisfaction.

Arbaugh and colleagues also note that whether it is learner-learner or learner-instructor interaction that influences satisfaction has produced mixed results in the literature, although it leans more so towards the instructor even though they have been understudied in the research (Arbaugh, et al., 2009). They also discovered that an instructor's use of immediacy behaviours and actions to bring students together in the online environment was a strong predictor of student learning, more so than student demographics or course design (Arbaugh, 2001). Further, in another study exploring a range of variables having an impact on learning quality, the investigators found that instructor mentoring and pacing of the course content, were the most important variables linked to learning quality (Peltier, Schibrowsky, & Drago, 2007). Clearly, the role of the instructor and the importance of creating enough social and teaching presence as discussed in this case study affirms these findings. Students with a sense of high social presence in their online course, facilitated by instructors who have good teaching and social presence, results in students who perceive high levels of learning in discussions (Richardson & Swan, 2003) as well as satisfaction (Arbaugh, 2010).

A student's reaction to feedback, and the impact it has on their learning, of course, is dependent on their personal learning goals, their motivation. It is also due to affective reactions to the assignments, content and task work of the course (Bandura, 2003). The feedback in SP 5 would provide some support to these claims. This cohort of

students had a very low level of interactivity in the course and it was noted in their evaluation that they did not make the best use of the learning experiences. Their response rate to the evaluation was also very low. There was a 20 per cent feedback percentage ratio in terms of instructor to student postings. This suggests that even with increasing efforts, such as in the case of instructor 1 during this study period, there are times when a cohort of students may not be as motivated or as engaged with the course, its content, and the feedback provided, and that this will show up in evaluation data. This necessitates that satisfaction data from an instructor and a course be examined over a period of time, rather than as one off event to ensure reliable interpretation.

The results of this case study provide insights for online instructors and course controllers looking for specific indicators to improve measures of course satisfaction on institutional surveys. Instructor social and teaching presence appeared to positively influence students' satisfaction with an online course of study, in particular, feedback and quality of teaching. Instructors can establish teaching presence in their online learning environments by engaging students through the methodical design, facilitation, and direction of the course (Picciano, 2002).

Another component of instructor presence is facilitating productive discourse. The task of facilitating discourse is necessary to maintain learner engagement and refers to focused and sustained deliberation that marks learning in a community of inquiry (Overbaugh & Nickel, 2011). The indicators that reflect successful discourse facilitation include:

- the instructor identifying areas of agreement and disagreement;
- seeking to reach consensus and understanding;
- encouraging, acknowledging, and reinforcing student contributions;
- setting the climate for learning;
- drawing in participants;
- prompting discussion; and
- assessing the efficacy of the process (Shea, Li, & Pickett, 2006).

However, (Overbaugh & Nickel, 2011) suggests that this level of facilitation may not be necessary for highly structured courses and may, in fact, be a waste of the instructor's time.

Finally, indicators for establishing instructor presence during direct instruction include coherent presentation of content and questions, focusing the discussion on specific issues, summarizing discussion, confirming understanding, diagnosing misperceptions, injecting knowledge from diverse sources and responding to students' technical concerns (Baker, 2010). Having a sense of humour and instructor demonstrations of humanity in the course also increases social presence.

One of the limitations of this case is study is whether these same outcomes would be seen in other courses, for example, those that are more quantitative in nature such as finance or accounting subjects. Further investigation is required, perhaps on a larger and broader scale as course content may be a factor in evaluation outcomes. For example, disciplinary effects explained 67 per cent of the variance in student

satisfaction with the educational delivery medium in a sample of 40 online MBA students (Arbaugh & Rau, 2007).

Conclusion

This case study explored instructor presence on student evaluations of feedback and quality of teaching course in a post-graduate management and leadership course.

This scholarship of teaching and learning inquiry supports what the literature is beginning to define. That is, there is a relationship between instructor presence and perceived student satisfaction with their online course experience. This case study has also provided an analysis of how much facilitation and engagement might be required to ensure student satisfaction with feedback and quality of teaching. This of course has implications for staff training, selection, and resourcing. Professional development is needed for online educators, not just in relation to the technology itself, but also on how to facilitate student engagement in discussions and in course design so that adequate levels of teaching and social presence, which support cognitive presence, can be put into place.

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