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Factors Influencing Students' Learning Experience in Online Peer Learning

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***Abstract*—**This paper reports on the preliminary findings of a research-in-progress project investigating what factors influence the students' learning experience while they study in an online environment. Online peer learning activities combined with current technology are expected to improve students' learning experience. The students were asked to respond to an online survey and attend virtual focus groups. Semi-structured interviews were also conducted with the teaching team. The questions raised were in the areas of relevance, reflection, interaction, teacher support, peer support, making sense, and course technology. This research utilizes a mixed method (quantitative & qualitative) data collection and data analysis. The preliminary findings from the research to date show that at the end of semester, students shifted from focusing on teacher support and content knowledge to an increased focus on technology and interaction through personal reflection of what and how they were learning.

***Keywords*-**peer learning, learning experience, online peer learning, teacher support, interaction, relevance

I. INTRODUCTION

Currently, online learning is very popular in both public and private educational institutions [1]. However online learning is not as easy or affordable as first imagined. There are two important issues in online learning impacting staff and students. Teaching staff face issues of increasing financial pressure at the institutional level that then influence increasing staff teaching loading. For students the principle areas of concern are around increasing student isolation and drop out [2] and decreasing student's learning outcomes [3, 4]. The reason is that universities not only have to provide online learning resources but also are in competition with other universities who also promote various consumables for online learning. There is increasing resources being redirected to correct declining market share, particularly in the areas of new technology, new teaching practices, and new types of course content such as Problem-Based Learning (PBL). One such area focusing on students has been 'Peer Learning'.

To begin with, peer learning focuses on "the use of teaching and learning strategies in which students learn with and from each other without the immediate intervention of a teacher" [7]. Learners can discuss experiences, ideas and concepts with each other as they engage with their peers, reflect on what they are learning and improving their personal knowledge by being part of peer discussion experience [5]. As technology advances, any technology used to support an online learning environment must be set up and function appropriately. This is to better enable students to engage effectively with their learning experiences and in particular, enhance students' interaction with peers as they learn [6].

There are various aspects identified from previous research that impact peer learning in an online environment such as the teacher, unit content, technology, peer activities, and social/community relationships. This case study focuses on the student cohort responses during the semester in order to validate the instrument for the main data collection activity.

II. METHODOLOGY

A. Preliminary Findings: Factors Influencing Students' Learning Experience

Baseline data were collected from online students by using online surveys and focus groups. In addition, semi- structured interview with teaching team were conducted.

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During semester, two online anonymous surveys were made accessible to online students at the beginning and the end of semester. Students were studying online using the Learning Management System (LMS) discussion boards and using Collaborate for virtual tutorial. In addition, at the end of 2nd survey, students were offered an invitation to attend a virtual focus group session. The surveys were adapted from the Constructivist Online Learning Environment Survey (COLLES). COLLES is appropriate for investigating online learning and was adapted for this research as the 24 online students to respond to topics such statements ask as relevance of the course, opportunities for interactivity and reflection, teacher and peer support, and facilitated However, survey missed a topic relevant to interpretation. this research, technology, which was added as technology has the ability to impact in an online environment.

The survey has seven parts including relevance, reflection, interaction, teacher support, peer support, making sense, and course technology. Open-ended questions were also provided at the end of survey. To date, both online surveys have been completed. The response rate received was 14% of student population (n=28) for the 1st online survey and 12% of student population (n=24) for the 2nd online survey. We understand that students who spend time to respond with feedback are usually those who have a determined position about heir learning experiences. In the first survey students were asked to rate their response to the 32 statements within the 7 topics (see Table I) on a scale ranging from 5 (almost always) to 1 (almost never). Although the percentage of survey responses was low, 5 students were willing to attend the focus group session to answer questions and provide additional comments related to the 7 topics. Also, data was collected individual interviews with all 3 teaching team staff members.

In the second survey students were again asked to rate their response to 32 statements of 7 topics but this time the survey was separated into 2 parts segregating responses from students into two distinct channels, what they preferred to experience (we prefer that) and what they actually experienced (we found that):

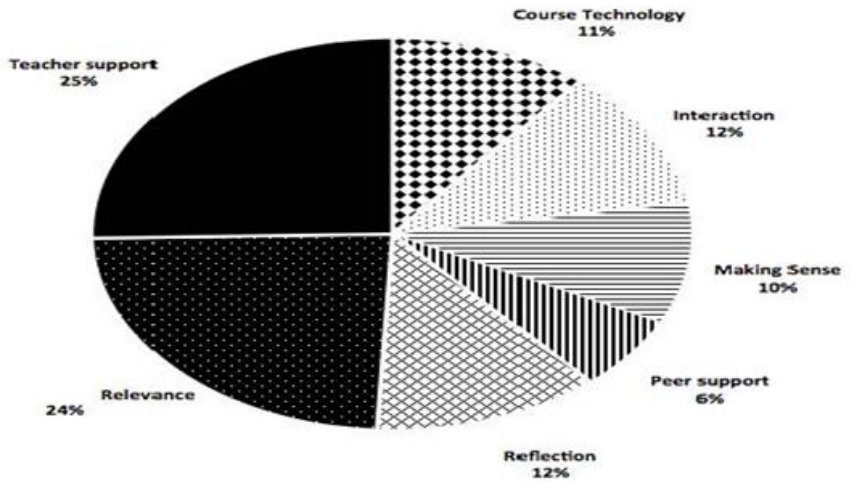

Figure 1- 1st Online Survey Responses

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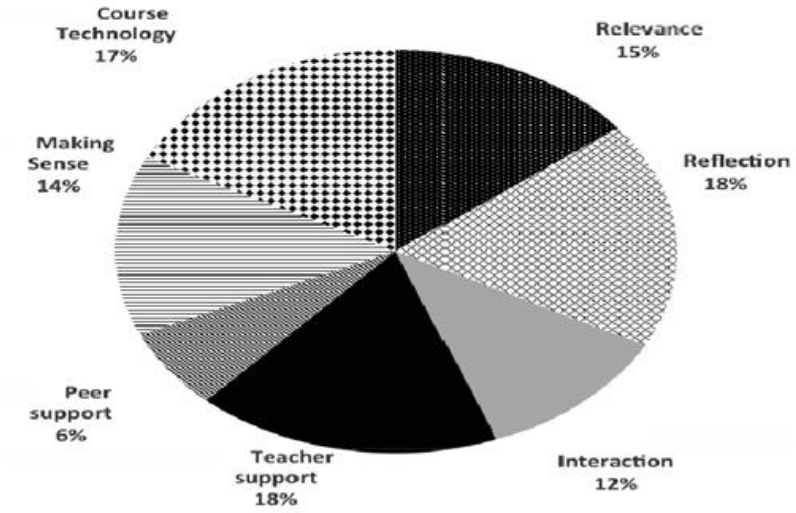

Figure 2- 2nd Online Survey Responses

TABLE I. 32 STATEMENTS OF A ONYMOUS ONLINE SURVEYS

Stmt no.	Relevance
1	My learning focuses on issues that interest me
2	What I learn is important for my professional practice
3	I learn how to improve my professional practice
4	What I learn connects well with my professional practice
	Reflection
5	I think critically about how I learn
6	I think critically about my own ideas
7	I think critically about other students´ ideas
8	I think critically about ideas in the readings
9	I think critically about how I actively share my own ideas/experiences
10	I think critically about how I actively engage with other students ideas/experiences
11	I think critically about how being active and engaging with other students has improved my learning experience
	Interaction
12	I explain my ideas to other students
13	I ask other students to explain their ideas
14	Other students ask me to explain my ideas
15	Other students respond to my ideas
16	I feel accountable in how I interact with other students
	Teacher support
17	The teacher stimulates my thinking
18	The teacher encourages me to participate
19	The teacher models good discourse
20	The teacher models critical self-reflection
	Peer support
21	Other students encourage my participation

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22	Other students praise my contribution
23	Other students value my contribution
24	Other students empathize with my struggle to learn
	Making Sense
25	I make good sense of other students' messages
26	Other students make good sense of my messages
27	I make good sense of the teacher's messages
28	The teacher makes good sense of my messages
	Course Technology
29	The course technology encourages my participation
30	The course technology support my learning
31	The course technology improves my learning experience
32	The course technology enhances the learning activities

III. RESULTS AND DISCUSSION

The 1st online survey shows that the students believed that teacher support and the relevance of the course material to their professional practice was of a high importance to them (almost half of Fig. 1). This would suggest that many initially believed that success could be more dependent on the teacher's ability and the quality of the content created to support their learning. The responses to the 2nd online survey indicated that students became more self-directed in their learning and the relevance of participation in developing their own learning is considered. This can be seen through the gains in reflection from 12 to 18%, being able to use appropriate technology to communicate and therefore learn from 11 to 17%, and again making sense which is also about communication from 10 to 14%.

This insight is evident in the comparison between the responses from the 1st online survey and the 2nd online survey. At the end of semester, students found that their thoughts around personal reflection and the use of course technology increased while their interaction with peers remained constant. Meanwhile, reliance on teacher support decreases along with learning content relevance as each student integrates information and bases relevance on personal experiences and knowledge. The students' open-ended responses within the surveys indicate that Technology (for example, online tools and messenger), peers, connection, work/assignment, competency, and the position of the teacher can influence students' learning experience in both positive and negative aspects.

Also, the teaching team's comments indicated that the seven topics of relevance, reflection, interaction, teacher support, peer support, making sense, and course technology including students, engagement and sharing can influence students' learning experience in both positive and negative aspects. Especially, the feedback from one of the teaching team is particularly relevant to the result of that new insight.

Our thoughts when comparing these two charts:

Fig. 1 shows that the students indicated they believed that teacher support and the relevance of the course material to their professional practice was high importance (almost half the chart). This would suggest that many initially believed that success could be more dependent on the teacher and content knowledge or external factors associated with learning.

The changes in the criteria ratings in Fig. 2 could indicate that students became more self-directed learners and we're looking at the relevance of participation in their own learning. This can be seen through the gains in reflection from 12-18%, being able to use appropriate technology to communicate and therefore learn from 11-17%, and again making sense which is also about communication from 10-14%. Therefore, the changes in the first chart could indicate that students subsequently felt that external elements such as teachers and content knowledge were not seen as important as first perceived than intrinsic or internal factors associated within the students' own ability to communicate, use technology, and cognition (through reflection).

IV. CONCLUSION

The changes of the learners beliefs represented in the results of online surveys, focus groups and interviews could indicate that students subsequently felt that students' own ability through

reflection became more valuable than teachers and content knowledge as first perceived. Findings from the two surveys formed the basis to inform the redesigned unit of semester 2 of year 2015. Discussions will take place with the unit coordinator to ensure the technology and activities focus more strongly on peer support in redesigned unit. It is expected that appropriate technologies can be used to support online students contribute to their peers through encouragement and facilitation while interacting with each other. Moreover, mixed method is used to investigate and validate how peer learning might impact different interrelated learning activities and processes conducted within an online learning environment.

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