TEACHING ADVANCEMENT AT UNIVERSITY (TAU) FELLOWSHIPS PROGRAMME

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Background

In the 2025 Strategic Plan of the University of Pretoria there is a vision to increase the number of online programmes. The role of the online facilitator to promote interaction and provide feedback in this environment is a key element of the online learning process together with a friendly social environment, scaffolding to remain on topic and guidance to learn collaboratively through interaction. A recent survey (Nagel, Samuels & Pretorius, 2014) using the Community of Inquiry (CoI) instrument (Garrison, Anderson & Archer, 2010) of graduates experiences of teaching and learning within a blended learning Masters programme at the University of Pretoria, suggests that Social Presence (the degree to which participants in computer-mediated communication feel affectively connected one to another) may be affected by the type of social media communication tools employed by study teams. As yet little is known about how these social media communication tools specifically affect group collaboration in blended learning teams and it is therefore the aim of this study to explore this in more depth.

Literature review

The quality of e-learning is often evaluated using the Community of Inquiry (CoI) framework (Garrison et al, 2010) in order to obtain an indication of the three most salient aspects of constructivist learning which includes *Social Presence*, *Cognitive Presence* and *Teaching Presence*. Social presence is defined as the degree to which participants in computer-mediated communication feel affectively connected one to another. Cognitive presence is conceptualized as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse; and teaching presence is defined as the design, facilitation and direction of cognitive and social processes to support learning (Swan, Garrison, & Richardson, 2009). The premise is that all three presences are necessary for the establishment of a collaborative online learning community. The online learning community is seen as essential for the development

Recently Nagel et al. (2014) conducted a survey of graduates (2007-2013) experiences of teaching and learning by the author in the Masters in Early Childhood (MECI) program. The professions included in this programme come from the following professional backgrounds, namely speech therapy, occupational therapy, physiotherapy, medicine, nursing, education, educational psychology, nutrition and social work. In modelling the collaborative requirements of the early intervention field, group work forms an essential part of the programme (Alant & Dada, 2005) with each student allocated to small, multi professional study teams that work closely together over a two-year period.

This quantitative study revealed that Teaching presence was the most highly rated presence (mean 4.50) rated by graduates, followed by Cognitive Presence (mean 4.35) and Social Presence (mean 4.0). Considering the prominence given to collaboration and social interaction in order to build the learning community within this programme, Social presence

was investigated further. On closer examination, Group Cohesion and Open Communication questions about the online medium showed significantly lower scores ($p<0.01$) particularly for the 2013 cohort of graduates in comparison to the rest of the participants combined. It is hypothesised that the scores and therefore the collaborative learning experience, may have been affected by technical factors in the new learning management system (LMS) employed at the time, such as student reported user unfriendliness with the discussion board and synchronous Chat tool facility which appeared to be one of the few differences between the two cohorts Not much is known at this stage about how online communication media used for e-learning influence Social presence and whether some tools are more conducive than others for information exchange and fostering group cohesion and open communication. Fish et al. (1992), for example, found that media with low social presence was inadequate for solving complex problems or communicating socially difficult messages. Low social presence refers to diminished cues about the characteristics of a person and limited information about their facial and bodily expressions which is often lost in computer assisted communication. In addition, features of the task at hand also influences how communication technology is used. It is hypothesised, for example, that the immediate delivery of synchronous communication tools e.g. WhatsApp, which includes a pop up mechanism for displaying messages may have a disruptive effect as they may be perceived to be intrusive. In addition, the shortened nature of instant messages can also contribute to misunderstandings and communication breakdown which may further impact group dynamics. In contrast, asynchronous communication tools such as email and discussion boards may slow down the learning process. This would allow more time for reflection and more careful consideration of the content of messages before it is posted thereby resulting in decreased opportunities for communication breakdown. Since the characteristics of media lead to specific choices about the use of different media, it would be useful to know the types of communication media tools employed by students for the purposes of information exchange and collaboration as well as their possible influence on Social presence within a community of inquiry framework. Furthermore, it would also be beneficial to know the advantages and challenges of each tool for collaborating in blended learning study teams who are required to work together and produce specific programme outputs.

Methodology

A follow up mixed methods study was conducted with graduates from the 2014 and 2015 MECI programme. The quantitative CoI survey instrument was also administered to this group to check whether the same pattern of Social presence scores was obtained in relation to the other presences. Descriptive statistics (means and standard deviations) was calculated for each of the domains of the CoI. The Student T-test calculator for 2 independent means on the Social science statistics website http://www.socscistatistics.com was used to check for any significant differences between the presence scores from the CoI.

Respondents were also interviewed about their choices of social media communication tools employed for the various learning activities in the MECI programme, the purposes for which they were employed as well as advantages and challenges of each tool. Since students were geographically dispersed across South Africa, telephonic interviews were conducted by a research assistant to decrease potential bias and social desirability of responses. The telephone interviews were recorded and qualitative responses transcribed verbatim. Follow-up email requests to elaborate on or explain certain responses were sent to each participant after careful reading of each interview transcript by the principal investigator and the research assistant. Both the principal investigator and the research assistant kept reflective notes during the initial reading of the transcripts and data analysis. Interview transcripts were analyzed using standard thematic analysis procedures (Braun & Clarke, 2006) to generate themes.

Ethical clearance for this study has previously been obtained from the Faculty of Humanities at the University of Pretoria.

Results

All participants (24/24) completed the quantitative CoI survey instrument, while eleven respondents agreed to participate in a follow-up qualitative interview about their use of social communication tools in the programme.

The average scores obtained for all respondents (n=24) were calculated for each presence. In contrast to the findings of cohorts in previous years (2007-2013), Social Presence (SP) was the most highly rated presence (mean=4.23) followed by Teaching Presence (TP) (mean=4.18) and Cognitive Presence (CP) (mean=4.03). Social Presence sub domains such as group cohesion and open communication which had been previously rated as significantly lower in previous cohorts, did not show any significant difference for the 2014/2015 cohort ($p<0.01$).

The qualitative results from interviews conducted revealed that students used a range of social media communication tools to collaborate depending on the type of activity outcome. For team building and team alerts, a mobile messaging tool, WhatsApp, was the tool preferred by team members. The major benefits of the tool as reported by respondents, was that it was always available, readily accessible to everyone as well as being quick and convenient way to share information and share personal stories and daily life experiences. It also, however, has the potential to become invasive and disruptive if not controlled well as some respondents reported feeling pressured to respond as soon as possible.

For brainstorming and planning their online discussions, respondents preferred using an online instant messaging tool such as Skype chat. This was also the preferred choice for managing any team conflict. Skype chat was seen as beneficial since all team members could all be online at the same time, but was a better platform to brainstorm than WhatsApp as

viewing of the discussion thread was easier. It allowed participants to share their personality traits and convey emotions through emoticons. A few respondents reported to experience some connection difficulties and also mentioned that the typing of long responses required a "wait time" from all.

Email was the tool used by teams to assemble the group product for the module, namely the team assignment as well as for rating and reflecting on their performance in the assignment. This medium was seen as being more formal and gave team members time to respond with more thought as it was asynchronous and thus members felt less pressure to respond immediately. It was also seen as an archive for team artifacts which could be shared amongst each other as well as provided a paper trail for any team decisions. The main challenge with email was the slower response time since many members did not always check their email regularly resulting in team decisions taking a long time. Respondents recommended that teams should have a specific rule about email response time. It was also cautioned that misunderstandings and misinterpretation could result from email communication and it was recommended that emoticons be used in this medium as well so that tone could be interpreted.

The University´s learning management system (LMS), specifically the discussion tool, was only used for conducting a three-day online discussion which team members used to compile the team assignment. This tool was found to provide good structure and allowed participants to see the development of the academic argument. In this way it allowed teams to be more focused and allowed the discussion to flow better. Since it was incorporated into the LMS, lecturers were able to access and would at times give input and feedback. However, the LMS was reported to be highly prone to technical, login and connection difficulties due to maintenance often occurring after working hours, the time when students in this programme could only access it. Since most students tended to access the LMS via a computer or laptop, rather than a mobile device, at times the LMS became totally inaccessible due to power outages, the result of infrastructure challenges in South Africa. Frustrated with some of the technological challenges, some teams even resorted to abandoning the LMS and chose to then work in a less data intensive, online collaborative writing platform such as Google Drive.

Conclusions

Quantitative results revealed high scores for all three presences needed for establishing a collaborative learning community. High Social presence scores in particular may be due to the fact that students employed a wide range of synchronous and asynchronous social media communication tools in accordance with the needs of their study teams and the characteristics of the particular learning activity. Qualitative results also revealed that they were aware of the benefits and limitations of each tool and were willing to adapt and change if the situation demanded it in order to ensure better collaboration. However, while online learning is

becoming ever more prominent in South African universities and many institutions are investing heavily in learning management systems, the results of this study reveal that students in this programme most often tend to work outside the LMS since it is still vulnerable to infrastructure challenges such as an irregular power supply as well as high costs of data.

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