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Community of Inquiry a Precondition of Higher Learning in Online Journalism Courses

Research Paper:

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Abstract

This study explores the indicators of a community of inquiry present in the asynchronous computer conferences of three MA (Journalism) online courses offered at the Ateneo de Manila University.   The Community of Inquiry Model, developed by Archer, Garrison, Anderson, and Rourke (2001), from the University of Calgary in Canada, illustrates how three elements – social presence, cognitive presence, and teaching presence – combine to create a community of inquiry, which is a pre-condition for higher learning. In the courses analyzed, where students were generally satisfied, a community of inquiry was created. Occurrences of social, cognitive, and teaching presence in the courses analyzed in this study showed possible signs of higher learning.   However, satisfaction with the courses did not guarantee higher learning, which was facilitated by meeting the students' needs and making them perceive a positive learning experience.

Online learning is greatly altering teaching and learning transactions. However, its aim is still congruent with that of traditional face-to-face learning – that is, to produce critical higher level education. To achieve this, online learning must try to recreate the successful features of traditional classroom learning. Dewey (1938) and Laurillard (2002), as cited in Garrison and Anderson (2003) stress that true education must go beyond the access to information, and involve an "engagement with others" to construct and apply knowledge. McIsaac and Gunawardena (1996) note that the concept of interaction leads to effective distance and traditional education programs. They cite Moore's (1989) three types of interaction essential in distance education: (1) Learner-instructor interaction, which provides "motivation feedback, and dialog" exchanged between the teacher and the student; (2) Learner-content interaction by which students gain "intellectual information" from the learning material; and (3) Learner-learner interaction, wherein students exchange "information, ideas and dialog" among themselves.

This clearly implies that effective learning online primarily relies on the social experience of the participants or the creation of a community. Hamman (2001, p. 5) defines community as "(1) a group of people (2) who share social interaction (3) and some common ties between themselves and the other members of the group (4) and who share an area for at least some of the time." In our notion of a traditional community, this interaction arises because of mutual interests, and occurs as the members gather at a physical place, at a specific time. However, in today's culture where the gathering of members is becoming more difficult due to geographic and time constraints, CMC provides a more practical and efficient tool for the creation of online communities (Johanson, 1996; Hamman, 2001). Through the Internet, a group of people can "carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace" (Rheingold as cited in Johanson, 1996). Simply put, this means that members of the community need not physically be together to develop attachments with each other using the Internet as a communication tool.

If the community's aim is to produce higher learning, the members should question, reason, connect, deliberate, challenge, and develop problem solving techniques (Lippman, 1991). What is then created, through the nature of CMC, is a *community of inquiry* – where social interaction within the community is directed by a structure of the discussions, resulting in critical thinking. Within this framework of a learning community, the Community of Inquiry Model was developed, illustrating the interplay of three core elements: social presence, cognitive presence, and teaching presence (Archer, Garrison, Anderson, & Rourke, 2001).

This study explored if the three elements of a Community of Inquiry present in three the online subjects in the M.A. in Journalism program offered at the Ateneo de Manila University, which were deemed successful based on student satisfaction ratings. The specific questions in this study were: (1) What is the perceived satisfaction rating by the students of the three M.A. Journalism online courses? (2) What are the indicators of a Community of Inquiry present in the text-based, asynchronous computer conferences of the three M.A. Journalism courses?

Conceptual framework

In online learning, where interaction occurs without the non-verbal or paralinguistic communication cues present in face-to-face learning, a community of inquiry is still possible through means that compensate for the deficiencies. The Community of Inquiry Model asserts that through asynchronous computer conferencing, three core elements contribute to the creation of an educational experience in a virtual environment: social presence, cognitive presence, and teaching presence.

According to the model, social interaction occurs among members of the group who are trying to project their personalities online by maintaining social presence. Participants in the interaction attempt to create and sustain meaning through manifestations of cognitive presence. To completely realize the educational outcomes, teaching presence enters into the social interaction and provides structure and direction to the discussion. Appropriate combination of these factors will lead to a fruitful educational experience. Figure 1 illustrates the relationship of these three elements.

Figure 1. The Community of Inquiry Model (Garrison, Anderson, & Archer, 2000)
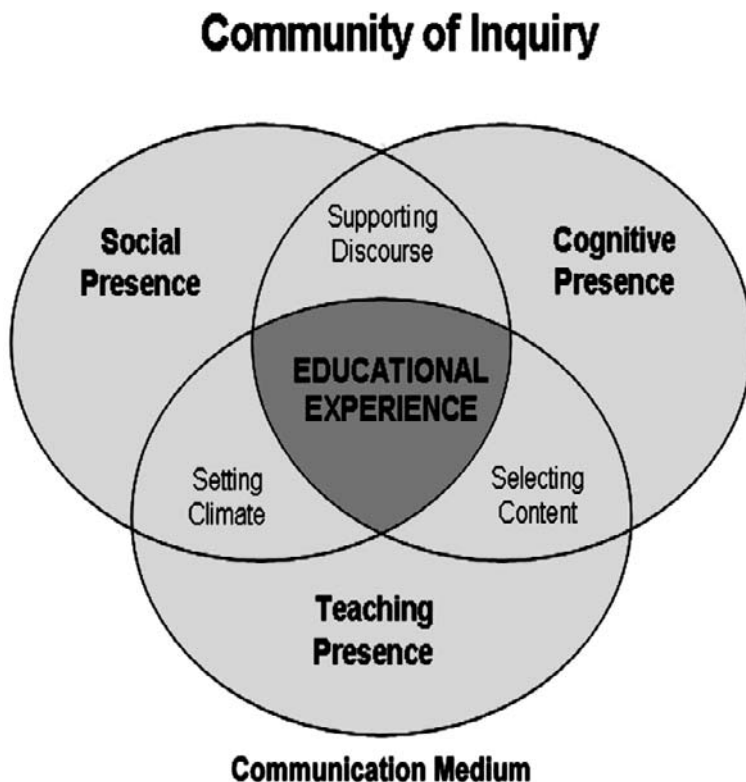
1. Social presence

Social presence is defined as "the salience of the other in a mediated communication and the subsequent salience of their interpersonal communication" (Short, Williams, & Christie, 1976 cited in Gunawardena & Zittle, 1997). It is rooted in two social psychology concepts – intimacy and immediacy – which are originally applied to non-mediated interpersonal communication (Lombard & Ditton, 1997).

According to Aron, Aron, and Smollan (1992 as cited in Jettmar & Rapp, 1996), intimacy is a process of increasing self-disclosure from both parties of the interaction with each individual feeling "his or her innermost self validated, understood, and cared for by the other". It relates to people's expression of personal thoughts, ideas, and situations. This concept, suggested by Argyle and Dean in 1965, states that participants of face-to-face interpersonal communication use varying "physical proximity, eye-contact, intimacy of conversation topic, amount of smiling, and other behaviors to establish an equilibrium between conflicting approach and avoidance forces" to increase the level of intimacy (Lombard & Ditton, 1997).

Immediacy refers to the "psychological distance between communicators" (Weiner & Mehrabian, 1968). This is enhanced by nonverbal cues such as facial expressions, body movements, and eye contact. When these senses of the interacting participants are stimulated, communication becomes "more intense, more affective, more immediate" (Rourke et al., 2001). Because the degree of social presence of a communication medium is determined by how nonverbal cues are transmitted (Gunawardena & Zittle, 1997), a particular type of message should be conveyed through an appropriate medium. This could affect activities such as the exchange of information, problem solving and decision making, opinion exchange, generation of ideas, persuasion, conflict resolution, maintaining friendly relations, bargaining, and getting to know someone (Spencer, 2001).

CMC users employ certain strategies that compensate for the lack of nonverbal cues to project social presence. These indicators of social presence in asynchronous computer conferencing discussions are categorized as follows: emotional expression, open communication, and group cohesion. Emotional expression pertains to the closeness, warmth, and attraction created between the members of the social interaction. With the absence of non-verbal cues, this is manifested through paralanguage, humor, and self-disclosure. Open communication refers to reciprocal and respectful exchanges. This is reflected through mutual awareness and recognition to acknowledge each others' "attendance" to the discussion. Group cohesion involves activities that build and sustain group commitment, such as greeting and addressing participants by name, referring to the collective group, and creating a sociable mood (Rourke et al., 2001).

Social presence is a necessity in the creation of a community of inquiry, as inquiry involves "sustained critical discourse." In a learning environment, establishing relationships and a sense of belonging is important as this can encourage the students to ask questions, be critical of each other, and contribute ideas (Garrison & Anderson, 2003).

2. Cognitive presence

Social presence is an essential element to achieve a rich discussion in asynchronous communication. However, if the aim of the interaction is to create an educational experience, cognitive goals should be blended with affective goals.

Cognitive presence is defined as "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (Garrison, Anderson, & Archer, 2000). Higher education's goal is to develop critical thinking skills, and to assess if this is achieved, cognitive presence is seen in four phases (Garrison, Anderson, & Archer, 2000).

The first phase of the practical inquiry model is the occurrence of a triggering event. This is usually a problem, issue, or dilemma that emerges from experience. In an educational context, a triggering event may be an expectation or a task coming from the teacher or any group member (Garrison, Anderson, & Archer, 2000). This "state of dissonance or feeling of unease" is identified, recognized, and raised to the group, eventually leading to the second phase, exploration (Garrison, Anderson, & Archer, 2001).

Exploration occurs when the participants start to understand the nature of the triggering event and moves to further investigate the relevant information. During this phase of questioning, brainstorming, and exchanging of information, the participants constantly shift between private or individual, and shared or social experiences (Garrison, Anderson, & Archer, 2001).

The ideas generated during the exploration phase are then processed during the integration phase. The participants of the learning process will start to create meaning out of their discussion by formulating all the information and knowledge they have into a coherent concept (Garrison, Anderson, & Archer, 2000). To aid them in this phase, someone has to "diagnose misconceptions, provide probing questions, comments, and additional information in an effort to ensure continuing cognitive development and to model the critical thinking process" (Garrison, Anderson, & Archer, 2001).

The fourth phase in the practical inquiry model is resolution. By this stage, a solution or hypothesis to the issue or problem raised by the triggering event must be formulated and applied. A consensus among the members of the interaction must be formed regarding the conclusion of the inquiry, and they may eventually move on to a new problem "with the assumption that students have acquired a useful piece of knowledge" (Garrison, Anderson, & Archer 2001).

According to Garrison and Anderson (2003), the essential purpose of an educational experience is to show "an appreciation of, and commitment to, the value of thinking progressively through a problem and dilemma such that some worthwhile and long-term benefit ensues" (p. 3). Therefore to achieve cognitive presence, participants of the e-learning discussion should be properly guided through each of the phases of practical inquiry.

3. Teaching presence

In face-to-face classroom learning, the teacher plays a big role for learners to acquire a meaningful and worthwhile education experience. Aside from teaching, among the other responsibilities of a teacher include being subject matter experts, educational designers, and social facilitators (Garrison & Anderson, 2003). Various studies in teacher immediacy indicate that certain non-verbal and verbal behaviors of teachers in the classroom contribute to a closer relationship between the interacting parties, thus resulting in greater motivated performance and increased student satisfaction and learning.

Computer-mediated communication, especially an asynchronous text-based discussion, presents unique challenges to the projection of teaching presence. The role of the teacher in e-learning will be altered in order to influence the development of cognitive and social presence towards the building of a community of inquiry.

Garrison and Anderson (2003) define teaching presence as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (p. 29). The indicators of teaching presence fall under three primary categories: design and organization, facilitating discourse, and direct instruction.

In an online learning environment, design and organization of a course is more complex than that in a traditional classroom context. In designing courses, one major consideration with online learning is the technology. Educators need to appropriately design their approaches to teaching and learning to exhaust and maximize the capabilities of the medium. Also, the curriculum must be suitable to the needs and characteristics of the learners. This means that the quantity of course materials and information to be given to the learners should not be too many or too few (Garrison & Anderson, 2003). This category likewise covers how instructors create and negotiate timelines and synchronize class activities and projects. In terms of organizational services, the teacher should be able to provide guidelines and tips regarding the effective use of the medium, and to regulate the discussions by establishing netiquettes. Lastly, as part of the design and organization task, the teacher should be able to give macro-level comments about the course content. This entails providing students with a sense of the design or plan of the course and a constant reminder that all activities lead to the attainment of the learning goals (Anderson et. al, 2001).

The second category of teaching presence indicators is facilitating discourse. This is important to motivate, to engage, and to hold the interest of the students in active learning. To accomplish these, the teacher must closely manage and monitor the discourse in the e-learning environment to make sure that quality and focused contributions are produced. All comments and postings are regularly read to identify areas of agreement or disagreement; to seek to reach consensus/understanding; to encourage, acknowledge, or reinforce student contributions; to set climate for learning; to draw in participants and prompt discussion; and to assess the efficacy of the process (Garrison & Anderson, 2003).

The final teaching presence category is direct instruction, wherein teachers "provide intellectual and scholarly leadership and share their subject matter knowledge with

students" (Anderson et. al, 2001). There are specific indicators to show that the teacher is a subject matter expert. First is the presentation of content or posing a question to an individual or group. Second, teachers focus the discussion on specific concepts or information necessary for knowledge construction. Third, the discussion is summarized to develop and emphasize the context of the discussions. Fourth, teachers should confirm understanding through assessment and explanatory feedback. The fifth task is to diagnose misconceptions that impair student learning. Sixth, teachers should be familiar with diverse sources that may be referred to an individual or group for further study. Lastly, it is part of the teachers' task to respond to certain technical concerns (Anderson et. al, 2001; Garrison & Anderson, 2003).

Teaching presence integrates all the elements of a community of inquiry "in a balanced and functional relationship congruent with the intended outcomes and the needs and capabilities of learners" (Garrison & Anderson, 2003. p. 29).

Method

This research focused on the first three online courses of the M.A. in Journalism program offered by the Konrad Adenauer Center for Journalism at the Ateneo in partnership with the Department of Communication of the Ateneo de Manila University. The program leading to the degree Master of Arts in Journalism is designed for working journalists who wish to advance their skills with academic graduate-level training (AdMU M.A. in Journalism Website).

Three classes conducted during the first semester of school year 2003-2004 were studied. The following are the basic information about the courses taken from the AdMU M.A. in Journalism website:

Table 1. Basic Information on the Sample Courses

COURSE TITLE	CONTENT	DURATION	STRUCTURE
Journalism 200: Media Ethics	Tackled ethical and professional issues in the field of journalism relating to the use of sources, deception in news gathering, conflict of interest, and individual's right to privacy among others.	August 11 to October 12, 2003	Started with a one-week introductory session online and was followed by a three-day, face-to-face on-campus component. The bulk of the course discussion occurred online for a period of six weeks.
Journalism 201: Contemporary Issues in Media Law	Examined the prevalent legal and regulatory framework within which journalists operate, paying particular attention to restriction on newsgathering activities, the public's right to information, censorship, and recent developments in libel and defamation laws.	August 11 to October 12, 2003	Started with a one-week introductory online session, then a three-day on-campus component, followed by six weeks of online sessions.
Journalism 202: Advanced Reporting and Writing	Designed to enhance the journalists' storytelling skills by building on abilities to gather, verify, and analyze information and material; report fairly and accurately; and write clearly within deadlines. Students were required to work on various story assignments with enhanced sensitivity to journalistic principles such as accuracy, balance, and fairness.	June 23 to August 22, 2003	Started online and proceeded right away with the main online discussions for seven weeks. The students only met face-to-face in on-campus sessions during the last five days of the course.

Since the students of CFJ were working professionals, with different age and lifestyles as well as different geographical locations, most parts of the courses were delivered online. These cyber classes were conducted in the asynchronous mode, utilizing the bulletin board features of WebCT, a provider of e-learning systems to colleges and universities worldwide. Occasional synchronous discussions, through the Internet's chat capability, were also conducted (Valdez, Escaler, & Hofileña, 2002).

The initial phase of the study was the assessment of the perceived satisfaction of the students with the three online M.A. in Journalism courses through a survey. After satisfaction was identified, the main problem of the study was addressed through a content analysis of the asynchronous discussions of the three courses.

All conference transcripts were analyzed using the Transcript Analysis Tool (TAT), which was proposed by Fahy, et al. (2000) to address the reliability problems of the original Community of Inquiry content analysis template by Garrison, et al. (2000). Each sentence of the asynchronous discussion transcripts were categorized according to the following classifications – (1A) vertical questions, (1B) horizontal questions, (2A) non-referential statements, (2B) referential statements, (3) reflection statements, (4) scaffolding and engaging statements, (5A) quotations and paraphrases, and (5B) citations.

According to Fahy (2002), the TAT categories are capable of being aligned with Garrison et al.'s (2000) model. Each TAT category corresponds to particular elements in the Community of Inquiry model.

TAT Category 1A (Vertical Questions) can be an indicator of cognitive presence and teaching presence, as questions can trigger the discussion and serve the function of direct instruction. These are questions that may be specifically directed at a person, and may assume that a definite answer exists. The following are examples of vertical questions from the M.A. in Journalism discussion board transcripts:

- "How many counts is your libel case?"
- "Can I be charged with infringement by using a browser that automatically copies the article to the hard disk cache when I view the article?"
- "Did your management get something from suing?"

The same elements of cognitive and teaching presence are indicated by category 1B (Horizontal Questions). Unlike vertical questions however, horizontal questions are open to more than one right answer. It does not direct a question to a specific person; rather it invites others to help provide different possible answers. The following are examples of horizontal questions:

- "The ideological element has been very well discussed by the others in this thread, but I'd like to ask, even if it is a bit of shooting in the dark, if the economical aspect really doesn't play a part in this discussion?"
- "How do you improve note-taking?"
- "Is it OK to accept the offer of an NGO to finance your trip or coverage of a legitimate story?"

Non-referential statements (2A) indicate the existence of cognitive presence, specifically in the exploration phase, as facts or information are imparted. Likewise, 2A is a manifestation of teaching presence as content is presented, questions are answered, and misconceptions are clarified. Examples of non-referential statements are:

- "To date, Internet and mobile phones usage has increased substantially in major cities."
- "Nadler has offered practical tips and good prompts when doing interviews."
- "The doctrine suggests that you can make use of copyrighted materials only on four areas – scholarship, journalism, criticism, and commentary."

TAT category 2B (Referential Statements) is a clear manifestation of CoI's social presence. Acknowledging others' messages indicates open communication and group cohesion. This statement may be a direct answer to a question or a comment referring to preceding statements. The following are examples of referential statements:

- "The situations you cite are probably just 3 of countless cases journalists have seen and you may have realized that drawing up guidelines for all can be a tiring exercise."
- "I'm not sure my understanding of your points is correct."
- "I agree with your stress on research, as well as the need to become knowledgeable about a wide range of things, especially if a general assignment reporter."

Reflections (category 3), or statements that reveal personal values, beliefs, and opinions, show that social presence and cognitive presence exist. With this type of statement, there is a tone of self-disclosure, and the speaker seems to welcome questions (even personal ones), self-revelations from the others, as well as supportive comments. Though this type of statement may be personal, it is still related to the topic of discussion. Examples of reflective statements are as follows:

- "My only bad experience during interviews is when my tape recorder decided to take a day off in the middle of the interview."
- "I just worry about what the future will bring to my grand children (in case I marry) if there would be no regulation on the internet."
- "My news organization has an unwritten rule to use anonymous sources only on extreme circumstances."

Category 4 (scaffolding/engaging) statements exhibit the existence social presence and teaching presence. This type of statement aims to initiate or encourage interaction with warm remarks, which can include emoticons and other comments without substantive contribution to the discussion. This category also includes class instructions and reminders.

- "'JOY!!!' There :)"
- "When you post assignments, please use this format for the Subject line: assignment #1 (or 2, 3) / your name."
- "Looking forward to your group report."

Quotations and paraphrases (5A) and citations (5B) are categories that reveal cognitive presence in the integration and resolution phases, and teaching presence during direct instruction. Statements belonging to category 5A are those that refer to or quote or paraphrase other sources (books, articles, persons, websites, etc.). Examples of these are:

- "The original story came out in one of our publications sometime back and is also available on the internet, http://www.reportingpeople.org/issues_healthstory4.htm. "
- "In the article of Robert Corn-Revere, the Internet is being tested for its democratic credentials and the stakes it raises."
- "Let me quote Malcolm X: 'You get freedom by letting your enemy know you'll do anything to get your freedom…it's the only way you'll get it.'"

Statements categorized as 5B give the citation or attribution of quotations and paraphrases using any documentation format such as APA or MLA. Those that

mention significant publication information of a source, even without adhering to the parenthetical format, are also included here. Examples are:

- "(The Internet Galaxy, 2001)"
- "Capitalism and the Information Age: The Political Economy of the Global Communication Revolution, ed. Robert W. McChesney et al., 1998"
- "Chapter 5 (Conflict of Interest) of 'Doing Ethics in Journalism' (1999, Jay Black et al) was right."

Results and discussion

On the average, for all three classes, the students generally agree with the 12 satisfaction statements presented in the survey instrument. Since these average weighted means fall above the median range, it can be deduced that the students are satisfied with the three online courses. There are however slight differences with the average weighted means (AWM), and if ranked, students are most satisfied with:

1. Journalism 201 – Contemporary Issues in Media Law (AWM = 4.03)
2. Journalism 200 – Media Ethics (AWM = 3.98)
3. Journalism 202 – Advanced Reporting and Writing (AWM = 3.88).

In the three courses analyzed, where students were generally satisfied, a community of inquiry was evidently created in their asynchronous discussions. There is an obvious interplay of the elements of social presence, cognitive presence, and teaching presence aligned with the TAT indicators.

Specifically, the incidence of questioning, both vertically and horizontally, combined the elements of cognitive presence and teaching presence. As questions were thrown at the participants, there was control of the flow of discussion, as well as triggers for critical thinking and participation.

Non-referential statements, which impart facts or information, exhibited cognitive presence as it encouraged participants to think about and explore the information. These statements also indicate teaching presence as content is presented, questions are answered, and misconceptions are clarified.

Referential statements clearly illustrated social presence. With the recognition of other's messages, whether in forms of comments or answers to questions, participants of the discussions showed that they were aware of the presence of their classmates despite not being physically together.

Reflection statements, which reveal personal information such as experiences, beliefs, opinions, emotions, and feelings, exhibited social presence. This implies that during discussions, participants felt that they could trust their classmates with such disclosures because the nature of CMC results to uninhibited communication, as discussed in the related literature (Tu, 1996; Goldsmith, 2001). Reflection statements were also perhaps used as devices to create a personality in the faceless environment. As the online students talked about their family life, their work, their hometown or country, their preferences, or their feelings, they became more real to their classmates. Aside from social presence, cognitive presence was also created with reflection statements. In the discussions, the personal statements were usually

revealed in the context of their academic discussions, proof that the students were able to integrate their life experiences with the learning process.

Scaffolding or engaging statements include the salutations at the start of messages, their names signed at the end of the messages, jokes, greetings and well-wishes, a few emoticons, and even the teachers' class instructions. These clearly initiated, encouraged, acknowledged, or personalized interaction thus contributing to the creation of social presence and teaching presence.

Lastly, quotations and paraphrases, as well as citations of sources, were also observed in the discussion transcripts. Through these statements, cognitive presence and teaching presence were created as the different sources of information were integrated into the academic discussions and at the same time provided direct instruction.

Results indicate that the course where students were most satisfied, Journalism 201, had a balance of the three elements of the Community of Inquiry. With very little differences in the percentages of the distribution of cognitive, teaching, and social presence statements, this implies that an ideal learning environment where students can be satisfied would have equal amounts of the three elements.

Looking at Journalism 200, the course ranking second in the student satisfaction survey, there is also not much difference between the percentages of the distribution of the Community of Inquiry elements. Although the number of statements indicating cognitive, teaching, and social presence for Journalism 200 is similar to the number of statements of Journalism 201, Journalism 200 still ranked second in the satisfaction survey because there are other factors to consider in measuring satisfaction.

Journalism 200 (Media Ethics) and Journalism 201 (Contemporary Issues in Media Law) are both issues-oriented courses. According to Garrison and Anderson (2003), the approach for such courses is to "define the key question or issue, find the relevant information, suggest some meaningful order, and agree on a resolution" (p. 86). Clearly, cognitive presence, teaching presence, and social presence all played important roles in the activities of these courses. Since the three elements more or less balanced each other, the students felt more satisfied with the learning experience. It is important to note too, that the initial face-to-face meetings of the students during the second week of these two courses may have contributed to the creation of a community of inquiry in their later discussions.

Journalism 202 ranked third in the student satisfaction survey. Looking at the percentages, there are significant differences between the number of cognitive, teaching, and social presence statements. Three noteworthy matters can be observed from the data. First, Journalism 202 carries a relatively higher number of teaching presence statements as compared to the other two classes. Second, there is a significant difference between the number of teaching presence statements and social presence statements in Journalism 202. Third, the number of social presence statements in Journalism 202 is considerably lower as compared to social presence statements in Journalism 201 and Journalism 200.

In relation to student satisfaction, these observations carry relevant implications. Journalism 202 or Advanced Reporting and Writing is a skills-oriented course. In

such courses with defined subject matter and specific output, teaching presence is very important because there is a need to implement and monitor the learning activities and tasks with specific learning objectives set (Garrison & Anderson, 2003). The teaching presence role of providing direct instruction can help the students in testing their skills and eventually achieving higher learning. Unlike in courses that are issues-oriented, social presence may occur lesser in courses like Journalism 202. Since development of skills may be accomplished through individual activities, there may be few interactions between the students. This, however, may result less satisfaction, as indicated by results of this study. Traditionally, students seek out other students, and this contact is important in an educational experience (Garrison & Anderson, 2003). Another reason for the lesser occurrence of social presence is perhaps the fact that the students of Journalism 202 only met face-to-face during the last part of their course, unlike in the other two classes where students were able to physically meet for three days during the second week. Vrasidis and McIsaac (1999) revealed that in a blended classroom and online course, the face-to-face component may have an effect on the online discussions. Garrison and Anderson (2003) agree with this idea saying that an initial face-to-face meeting of the group can have "an accelerating effect on establishing social presence and can shift the group dynamics much more rapidly towards intellectually productive activities" (p. 54).

Conclusion and recommendations

Findings of this study concurred with what related literature said about CMC having the potential to provide an environment where participants of online learning can develop a sense of community. The occurrence of social presence, cognitive presence and teaching presence in the courses analyzed for this study were possible signs of higher learning. Furthermore, although satisfaction with the courses did not guarantee higher learning, meeting the students' needs and making them perceive a positive learning experience were among the factors that likewise led to it.

The importance of this study lies in the discovery of communication strategies in online learning that can lead to knowledge generation that is useful and worthwhile; and both the teacher and the student carry the responsibility of utilizing all means to consciously build a community of inquiry, to create a meaningful educational transaction.

Following are recommendations to online teachers and students, as well as suggestions for further study that could contribute to the continuing development of online learning.

1. For online teachers/facilitators

It is not enough for teachers to be providers of content in a learning situation. According to Garrison and Anderson (2003), it is the responsibility of the online teacher to "create the cognitive and social conditions that will allow and encourage students to approach learning in a meaningful way" (p. 14). Specific strategies that online teachers/facilitators can utilize with their asynchronous discussions are as follows:

- Teachers should require participation in the online discussions. Some students may find the amount of messages posted in asynchronous discussions overwhelming, which could cause them to remain lurkers or on-lookers in the discussion rooms. If a portion of the grade is allotted to participation in discussions, students will be encouraged to get involved. Be careful however with assessing not only quantity, but quality of posted messages as well.
- Collaborative projects must be required. One effective classroom technique is having learners cooperate in activities. Though students are not physically together in online learning, the teacher can give them projects and assignments that they can work on in smaller groups.
- Online instructors should give prompt feedback. Feedback does not only include criticisms of students' work or corrections of their mistakes. Aside from constructive criticisms, simple acknowledgement of posted messages will assert teaching presence in the discussions. If students see that the teacher is visible in the discussions, they are more encouraged to do the same as well.
- Teachers should provide structure in the online discussions. At the beginning of the course, the teacher should give a list of topics that will be covered. Deadlines should be set to avoid procrastination of students. Guidelines and rules for posting messages must be established. Instructional management can lead to cognitive benefits and sets online learning discussions apart from any ordinary online discussion.
- A separate discussion room for casual conversations and questions must be created. Some students may feel apprehensive about posting personal information in the academic discussion rooms. Providing them a "non-academic" venue helps build a community and reduces the feeling of isolation common to distance learners. Teachers should participate in these casual discussions to establish their own social presence as well.
- Discussion summaries should be provided periodically. This can ensure a common understanding and synthesis of the topics tackled.

2. For online learners

In traditional classroom instruction, learners often play a passive role and just rely on their teachers to provide knowledge. In online learning, however, students must take responsibility in managing their own learning. The following strategies are suggested for students' success with online learning:

- Learners should be aware of personal learning styles and should know the approach in learning that works best for them. Knowing their style will help them assess if online learning is fit for them or will help them adjust to the new learning environment.
- Learners should know basic computer skills. One of the greatest barriers to online learning is lack of knowledge, and consequently, lack of confidence with the technology. Before starting an online course, online learners should study the fundamentals of word processing and the Internet.
- Online learners should practise time management. One of the benefits of online learning is the flexibility of time it offers students. However, this flexibility can prove disadvantageous for those who do not manage their time well. Students should establish their online learning routine and take note of the deadlines set by the instructor.

- Online learners must improve their writing skills. Since online learning is heavily text-based, effective communication relies on how accurately the message is expressed. Students should also keep in mind that with online learning, messages may be recorded permanently, so this requires careful thinking and editing before sending or posting.

3. For further online learning research

This study is a simple exploration of the concept of community of inquiry and its correlation with satisfaction in a limited sample. For further research contributing to the development of online learning, the following are suggested:

- Research must be conducted to identify the manifestations of a community of inquiry in a larger online learning program and determine its correlation with success or failure of the online course.
- Research is needed to measure the degrees of manifestations of social presence, cognitive presence, and teaching presence to find out which among these contribute greatly to the community of inquiry.
- There is likewise a need to determine the extent of influence of the community of inquiry on teacher effectiveness ratings and instructor satisfaction with the courses taught.
- For a more comprehensive investigation of online learning, a study on how a community of inquiry is created in synchronous or real-time discussions can also be done.
- Future research can also aim to identify comprehensively the other factors that lead to student satisfaction in an online learning course and to higher learning through in-depth interviews.
- The process and stages of development of a community of inquiry may also be studied to fully understand how the participants utilize the identified strategies.

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