

**EXTENDING THE SOCIAL ASPECT FOR COMPUTER-SUPPORTED COLLABORATIVE LEARNING
(CSCL)**

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Abstract

CSCL has been popular for many years since the advent of ICT in education. Its benefits have been evaluated based on the social constructivist theories. A vital aspect to analyse is the social space among learners in a CSCL environment. This space is found vital in promoting learning, as the social aspects of learning are needed for effective learning. It is often said to be in opposition to individual learning where there exist much isolation. Using computers in learning does not facilitate learning if learning isolates learners in this way. Consequently, a CSCL environment that takes into account a social space that promotes learning based on social constructivist theories should be promoted. The aim of this paper is to analyse social space in relation to a group of learners in a CSCL environment. This includes evaluating the positive and negative group behavior of the said group. The implications of this study will also be discussed.

Introduction

The proliferation of network availability across the globe has facilitated the rapid growth of virtual communities. The virtual communities have greatly impacted the daily activities of people around the world, ranging from economic, social and educational domains. From the educational domain, those involved are mainly students and professionals. With the advancement of technology, they can interact with one another and they can also work collaboratively using chats, forums, bulletin boards etc. Chao-Min et al (2006) stated that member-generated content in the development of virtual communities is key for a viable and efficient virtual community. Members usually share knowledge and interests in order to foster such a virtual community. Thus, it is then pertinent to analyse the rationale for individuals when deciding whether to share or not to share knowledge with the members of the virtual communities in order to meet its objectives. Therefore, it is critical to analyse to what extent decisions of members of virtual communities are based on their need to socialize with other group members. This would certainly provide insights into how to stimulate the desired socializing that needs to go hand in hand when sharing knowledge in virtual communities.

Literature review

In the Educational domain, Computer-Supported Collaborative Learning (CSCL) environment, which is needed for the formation of virtual communities, has been a common scenario in most learning institutions. Wide research have been conducted to analyse the social aspect of collaborative learning in this environment. (Kreijns 1996, Hobaugh, 1997, Carroll., et al, 2003, Beers, et al 2005).

The word “collaborative” learning is a condition in which interaction among participants is expected to occur for learning purposes. Harasim, Calvert and Groeneboer (1997:149) provide a simple definition of collaborative learning as “collaborative or group learning which refers to instructional methods whereby students are encouraged or required to work together on academic tasks”. Similarly, Gerdy (1998) maintained that , learning is fostered when there exists a team effort compared to working in isolation. Good learning is collaborative and social in nature and not isolated. In addition, Hobaugh (1997) observes that inadequate group dynamics for communication amongst group members in online groups results in ineffective group action. Instructors or students do not understand the vital role group members play which are essentially as social actors. Researchers tend to focus on social interaction for only cognitive processes for collaborative learning and less on the social interaction aimed at enhancing socio-emotional processes underlying group dynamics. Moreover, instructors are of the opinion that encouragement for group dynamics is not important. On the other hand, learning should be carried out without too much socializing.

In contrast, Sproull and Faraj (1997) argue that a learning environment should not be solitary where members are merely information processors. On the other hand, they are active in their CSCL environment playing roles as social actors who seek affiliation and support. Kreijns (1996) supports this when he states that CMC (Computer-Mediated Communication focuses on cost, efficiency, and productivity. These objectives can be developed via strengthening social relations built on meaningful communication.

One main perspective which brokers the facilitation of the learning within a social framework is social constructivism.(Gredler, 1997). It places importance on culture and context in understanding what occurs in society and constructing knowledge (Mc Mahon, 1997). The assumption of the social constructivist is that reality is developed by human activity. The members of society give meanings to words. (Kukla, 2000). The role played by the social interaction is important. Knowledge is a human product, and is socially constructed.(Ernest, 1999; Gredler, 1997; Prawatt & Floden, 1994). Individuals create meaning through their interactions with each other and with the environment, they live in. Learning is a process, which humans constantly engage in. Thus, in order to make learning meaningful, there should be parallel social activities.

An activity humans are constantly are engaged in is communication and interactions, which involve socially agreed upon ideas, patterns and rules of language use.(Ernest, 1999). This is what makes us humans. Social meanings and knowledge are shaped and evolve through a process of negotiation within the communicating groups (Gredler, 1997; Prawat & Floden, 1994). Personal meanings are developed by these experiences and are affected by the inter-subjectivity of the group to which people belong. In addition, understanding the new information

and activities among the group members are developed with communication. (Rogoff, 1990; Vygotsky, 1987). In short, pertinent to effective learning is the social contexts that learners bring to their learning environment.

Malaysians have not escaped these driven forces of technological determinism. On a deeper level, subtle hidden forces of politics, economy, and socio-cultural forces of everyday experience affect Malaysians. Au Yong Geok Lian (2007) states that when defining science and technology; technology should be analysed as a component of a social system.

He states that technology is utilised to meet the challenges of globalization. In order to successfully meet them, two key concepts which are time and space need to be considered in human communication. Technical communicators always develop strategies to control and compress 'time and space' to meet the demands of these challenges. Social beings, without realising it, nurture a learning process, which fosters technology and is becoming a major part of their social reality.

Among the young group in Malaysia, they young are struggling in their quest to find direction in their lives and to develop their identities. At the same time, an unprecedented media culture has developed and challenged the development of youths. In short, technology is playing a major role in young people's lives and in society because it encompasses an entire way of life in which images, signs, texts and other audio-visual representations are connected with new realities. The influence on youth is pervasive; its messages are an important part of the daily activities and are socially structured around ICT use.

The communication between learners and instructors in asynchronous CSCL environments is mediated through subsystems (e-mail, discussion forums, chat) integrated with the CSCL environment. A range of negotiation tools to support group social skills have also been developed. (Beers, Boshuizen, Kirschner, and Gjselaera,2005). Kreijns et al(2003) describes factors for successful collaboration which include interdependence, interaction, individual accountability, interpersonal and small group skills, and active group processing. In addition, positive interdependence, positive social interaction, individual and group accountability, interpersonal and group social skills, and group processing are other factors needed for a successful CSCL.

Moreover, sociable CSCL environments emphasise the social and emotional aspects of group learning. A CSCL environment is perceived to be able to facilitate the emergence of a sound social space with attributes such as trust and belonging, a strong sense of community, and good working relationships. Another condition that is a prerequisite for this development of group behaviour is the the existence of a sound social space where members share norms and values, rules and roles, beliefs and ideals (Kreijns et al, 2004). A social space can be defined as 'sound' if the social space can be described as dynamic and positive relationships centering on emotional work, cohesiveness, trust, and a strong sense of community and belonging. Furthermore, Kreijns (2004) put forward the idea that fostering social interaction for developing a sound social space supports a sociable computer-supported collaborative learning environment(CSCL) where interaction of the group members are active.

In addition, Rourke also stresses the importance of a sound social space which has many benefits such as (1)enabling the social interacting necessary for collaboration (2) facilitating learning behavior and(3) increasing individual learning performance (Gunawardena, 1995; Wegerif, 1998; Brandon & Hollingshead, 19999; Rovai, 2001), but at the same time is also reducing feelings of loneliness and isolation. Thus, one can say that a sound social space should compliment a CSCL environment as it supports not oppose it.

However, opponents of CSCL put forward the idea that the emergence of sound social space may be problematic in CSCL environment as they utilize text-based computer-mediated communication (CMC) which can be a barrier to communication. This is because visual and non-verbal cues are crucial for impression formation important for the development of interpersonal cues, crucial for impression formation. This is part and parcel of the development of interpersonal relationships, which in turn, are prerequisites for the emergence of sound social space. (Short et al, 1976; Kiesler et al, 1984)

Correspondingly, Waither(1992) suggests that impression formation does not necessarily depend on visual cues. The absence of visual cues can even be beneficial for the creation of what he termed as hyper-personal effects (Walther, 1996). Reicher et al (1995) supports this as he maintains that the absence of visual cues could strengthen a group identity that has positive effects on group dynamics because it has special norms, based on unity and promotes social cohesiveness. Thus, members of a group utilize special technological features to bring about successful communication.

The research and findings

A questionnaire in figure 1 is used as an instrument to collect data concerning the students positive and negative behaviour based on Kreijns (2004).This is to determine the social space that exist among students in a CSCL environment. There are 129 subjects from The Open University of Malaysia where by a Learning Management System is imposed. This is where it is compulsory for them to use the chats, forums, bulletin board to communicate using their computers. They are required to work on their own using a module and post questions to their tutors and friends. Their face- to- face interaction is twice to three times a week depending on their course requirements. Five percent is allocated for this exercise. The mean is tabulated to discover the students' responses to the statements given concerning the positive and negative group behaviour. The results are stated below where the mean is stated at the end of every statement. The mean is based on the instruction whereby the students have to tick their most preferred responses based on the Likert scale given.

CSCL QUESTIONNAIRE

Figure 1

Instruction:

For each of the following statements, indicate your responses by ticking (/) in the appropriate boxes using the scale below.

- 1 Strongly disagree**
- 2 Disagree**
- 3 Agree**
- 4 Strongly agree**

	SOCIAL SPACE – POSITIVE GROUP BEHAVIOR	Mean
1	Course mates felt free to criticize ideas and/or statements of others.	3.0
2	We had a good understanding of our roles as a group.	3.0
3	Course mates kept in touch with each other.	3.0
4	We worked hard on group assignments.	2.8
5	I maintained contact with all other course mates.	2.9
6	Course mates shared personal information with each other.	2.7
7	The group involved in open conversations and/or discussions.	3.1
8	The group involved in lively conversations and/or discussions.	2.9
9	Course mates spontaneously started conversations with each other.	3.0
10	Course mates asked each other the progress of their assignments.	3.0
	SOCIAL SPACE – NEGATIVE GROUP BEHAVIOR	
11	Course mates felt that they were attacked personally when their ideas, statements and/or opinions were criticized.	2.1
12	Course mates were suspicious of others.	1.9
13	Course mates grew to dislike each other.	1.8
14	I did most of the work for the group.	2.0
15	Course mates delayed the progress of the work.	2.0
16	Course mates were unreasonable.	1.8
17	Course mates disagreed with each other.	1.8
18	Course mates had conflicts while working together.	1.9
19	Course mates gossiped about each other.	1.8
20	Course mates did not take each other seriously.	1.9

The scores reveal high mean scores for all the positive statements as compared to the negative ones. This shows that the students have positive view of working under a CSCL environment as they do not give a high rate to the statements supporting negative group behaviour. Even though the mean score is high for the positive group behaviour, there is still room for improvement to

foster a better CSCL environment. As a final note, a growing number of researchers from a variety of disciplines (e.g., computer-supported collaborative work, social psychology, organizational behavior) point out that it is not sufficient to focus on the functional perspective of group behaviour. Neglecting or ignoring social processes such as group forming, establishing group structures and sustaining social relationships can be considered as a pitfall (see Kreijns, Kirschner, & Jochems, 2003). In other words, what is needed are the development social CSCL environments, that is CSCL with both academic functionality as well as social functionality. Environments like these will not only fulfill the learning needs, but also their social needs, thereby involving a complete learning experience. Sociable CSCL environments facilitate socio-emotional processes such as affiliation and develop interpersonal relationships, trust building, social cohesiveness and a sense of community with the emergence of a sound social space. Interpersonal trust is an enabling factor for effective collaboration. Studies revealed that social cohesiveness positively mediates group performance. Hence, online constructivist learning environments should promote collaborative learning where members have a close relationship, have a shared a sense of community and agree to work towards a common goal. (Gunawardena,1995; Guzzo and Dickson,1996).

The need for this study is rooted from the development of a number of instruments to measure social aspects in CSCL environments where the focus has been on social presence (Short et al, 1976; Gunawardena & Zittle, 1997). They are sometimes used for measuring the social climate in a collaborating group (Rourke & Anderson, 2002) or the students' attitudes and feelings towards the medium (Gunawardena, 1995). Thus, more studies are needed to research the emergence of a sound social space in the CSCL environment. The concept of sociability should also analyse differences between CSCL environments in their ability to promote the emergence of a social space. This is because sociability is defined as the extent to which an ICT –based environment that should be able to facilitate the emergence of a sound social space (Kreijns et al, 2004).

Conclusion

With distance educational settings mushrooming with the advent of ICT, the application of sociable CSCL environments can be a critical success factor in education. When students are grouped in these settings, the members need to be team players in order to be a dynamic and efficient entity in their groups. Sociable CSCL environments enhance group dynamics especially the positive characteristics needed the formation of a viable learning group.(Philips, 1990; Rovai, 2001).Social interaction is considered to be a crucial factor affecting collaborative learning. In addition, social interaction is pertinent in the formation of groups to enhance group dynamics. That is the social interaction, which is needed for an effective and efficient performing group. In order to develop such a group, the network needs to be cohesive, interactive and has a sense of community. In short, these are the necessary characteristic for social space. A sound social space allows for open communication needed for collaborative activities to function effectively. A CSCL should be holistic encompassing technologically, educational and social aspects in order to create a successful learning environment.

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