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**Interaction with Tutors and Peers in Virtual Classroom:
A Case Study of Online English Language Teaching Programme in Pakistan**

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Abstract

Interaction is one of the important aspects of effective learning environment. Interaction can take place in different forms. It may be between a student and course materials, student and learning activities, student and teacher and among students. Computer-mediated communication (CMC) offers a type of interaction which is different from the traditional teacher-based classroom as it provides the learners multiple opportunities to explore alternative means to interact with teachers, peers, course material and activities. The present study focuses on feedback of the students who attended online courses of MA Teaching of English as a Foreign Language (TEFL) offered by the Department of English Language and Applied Linguistics of Allama Iqbal Open University (AIU). In this experimental study, two groups of students were selected randomly for CMC-based instructions in 2007 and 2008. The results of the experimentation suggested that the use of CMC in the existing distance education system improved peer interaction in a virtual classroom which helped students in their learning and professional development.

Keywords: Interaction, computer-mediated communication, distance education, English language teaching

Introduction

Technology has opened up new avenues in human development and interaction. It influenced every field of life, especially education. CMC helps in creating an environment independent of time and distance wherein valuable opportunities can be provided to students to interact with the tutor and among themselves. CMC-based interaction can be structured as one-to-one (email); one-to-many (List server managed groups) and many-to-many (bulletin boards and computer conferencing systems). CMC initiated a new era of distance education and “the point of attraction in this technology was its ability to support a collaborative learning environment at a distance and independent of time and space. It seriously challenged the dominant world-view of distance education, which was mostly independent, self-instructional learning based on mass produced learning packages” (Garrison & Anderson, 2003:24). CMC not only enhanced the quality of distance education but also created a climate that supported cooperative learning and critical-thinking activities through meaningful tutor/student interaction. According to Anderson (2008:61) “this interaction can take place within a community of inquiry, using a variety of CMC-based synchronous and asynchronous interactions. These environments are particularly rich and allow for the learning of social skills, collaboration, and the development of personal relationships among participants.” Computer-assisted tutorials, activities, simulations, and e-books are used for interaction. Students are engaged in an independent study, but they are not alone in a CMC-based environment. Emerging social software solutions allow students to meet and develop common interests, such as forming online groups, study-group relationships or engaging in cooperative course-related activities.

The Department offers English language courses and the Teaching of English as a Foreign Language (TEFL) programme. The MA TEFL is a two-year (60 credit hours) programme spread over four semesters. The students have to attend 12 classes for each course. Students failing to attend the required number of classes are declared fail even if all the other requirements of the course have been fulfilled. They have to write four assignments for each of the courses. The fourth assignment is based on projects on which they have to give presentations. At the end of each semester, they have to appear in the final exam for each of the courses they study. The researcher offered online courses using a CMC-ELT blended model for the students of MA TEFL. The students were provided guidance through online tutorials, discussions and forum. They were facilitated in online submission of assignments and feedback by the tutors.

Objectives of the Study

The objectives of the study were:

1. To study the problems and prospects of peer interaction in a virtual classroom.
2. To assess the role of tutors in fostering peer interaction in a virtual classroom.

Research Questions

- a. What are the issues related to peer interaction in a virtual classroom?
- b. How does the role of tutor change in fostering peer interaction in a virtual classroom?
- c. Do online courses/programmes help teachers in their professional development?

Research Methodology

The study was conducted through pre-test treatment and post-test control group design. The experimental study was conducted during Fall 2007 and Fall 2008 semesters.

Research Tools

The researcher received individual feedback from students regarding interaction in an online classroom through mid-term, end-term questionnaires and focused group discussions.

Sampling

The students were enrolled in two courses of the MA TEFL programme: 'The Language Skills' and 'EFL in the Classroom.' In the first phase, a group of 27 students was selected randomly for CMC-based instructions during the Fall 2007 semester from Islamabad, Rawalpindi, Abbotabad and Chakwal regions. In Phase II of the experiment, consent was sought from all the students (550) enrolled in the same programme/courses in the Fall 2008 semester. In this phase, the scope of the research was widened from five selected regions to the whole country. A group of 25 students was selected randomly from all over the country

for CMC-based instructions. All other students were considered as control group as they were taught the same courses in traditional distance education system.

Theoretical Framework

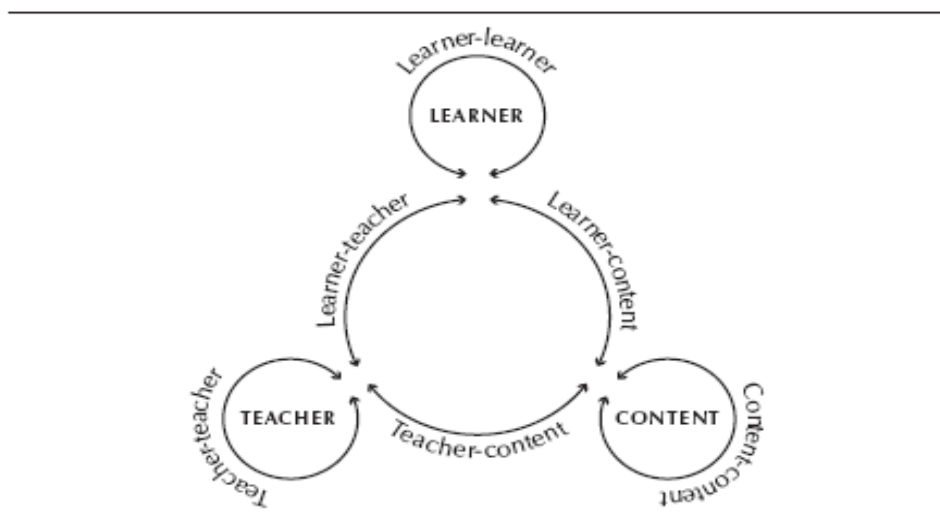
Interaction is the most important and critical component in teaching-learning process whether it is a traditional face-to-face classroom, distance education tutorial, smart classroom or virtual classroom. “Both teachers and researchers have stressed the value of interaction within the educational process” (Garrison, et al., 2003:41; Moore, et al., 2003:131). Interaction is essential for “efficient, effective and affective learning” (Anderson 2008). Interaction is “one of the higher order levels of feedback which all theorists agree are important in educational process” (Forsyth 1996:28). Distance education which was considered an independent study format but it also demands a learning environment in which both kinds of interaction can take place. In the past, interaction about the content was mostly been between teacher/tutor and student but now with the help of CMC it has become possible for students to interact with one another even they are geographically separated. Moore and Anderson (2003:132) suggest that interaction can take place in different forms in distance education: “between a student and course materials; between student and learning activities/examinations; between student and instructor; among students”. So, interaction creates a cooperative and collaborative environment which allows students to learn from course materials, the teacher/tutor and one other.

Lynch (2004:109) discusses that “today, students of both traditional and online classes are confronted with increasingly complex phenomena in their personal, social, and professional life. They need to develop a level of competency in multi-faceted reasoning strategies, effective communication skills, interpersonal skills, and lifelong learning strategies.” CMC has helped in creating such a learning environment in which quality teacher-student activities can be conducted either real time (synchronously) or in delayed time (asynchronously). Anderson (2008:58) explains different aspects of interaction in CMC-based classroom in Figure 1 below.

He argues that student-content interaction has always been a major component in the form of reading textbooks. Student-teacher interaction is supported in CMC-based learning in asynchronous and synchronous communication forms in text, audio, and video communications. Teacher-content interaction focuses on the teacher’s creation of content, like developing study material and activities,

which allows teachers to design and update course material and activities. Teacher-teacher interaction provides opportunities for teachers’ professional development and online teachers’ communities. Content-content interaction is a new and developing mode. Content is programmed to interact with other automated information sources to constantly refresh itself through updates and interaction with other content sources. Lastly, student-student interaction develops collaborative learning. Peer interaction is also important in developing communities of learning.

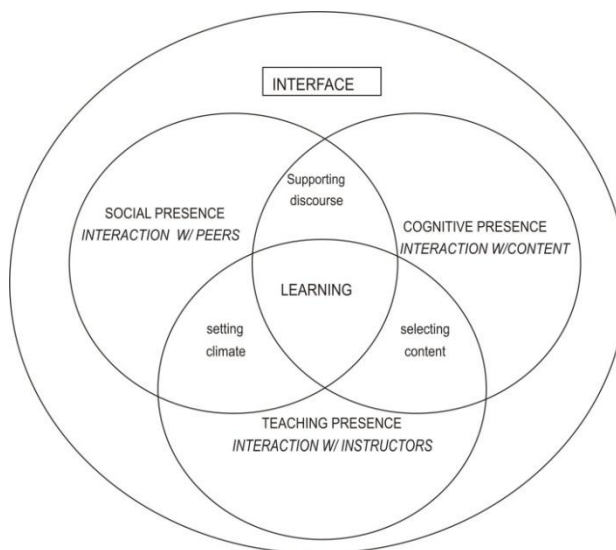
Figure 1: Interaction in Classroom (Anderson 2008:58)



The primary mode of interactivity in CMC is text-based. Faculty and tutors also rely heavily on text-based materials for the teaching of subject matter. The text-based medium of communication is used effectively for educational purposes. Garrison & Anderson (2003) discuss the characteristics of text-based communication. They see “writing as the direct transfer of the information conveyed by speech into a different, visible medium, and this assumption is getting more importance with the rapidly growing use of text-based, computer-mediated communication for educational purposes” (pp. 25-26). In written communication, students have more time to think and discuss course contents.

Swan (2004:1) talks about the relationship between interaction and learning experience in a CMC-based environment. Cognitive, social and teaching presence lead to a complex system of learning as mentioned in Figure 2.

Figure 2: Relationship between Interactions and learning in online environments (Swan 2004:1)



These elements overlap each other and construct an effective CMC-based learning experience for interaction among teachers and students and peers. The cognitive presence is a condition of higher-order learning which is consistent with the multi-phased educational process designed to construct meaning and confirm understanding. The social presence is defined as “the ability of participant in a community of inquiry, to project themselves socially and emotionally, as ‘real’ people (i.e., their full personality), through the medium of communication being used” (Garrison, Anderson 2003:29). The teaching presence reinforces the online community by its presence for a purposeful educational experience which needs an architect and facilitator to design, direct, and inform the transaction. The teaching-presence brings all the elements of a CMC-based learning experience together in a balanced and functional relationship congruent with the intended outcomes and the needs and capabilities of the learners.

The social constructivists believe in communities of practice and knowledge as a socially constructed phenomenon through action and communication. In the constructivist paradigm, CMC is a powerful means of constructing knowledge by making it possible, irrespective of geographical location and time. It makes it

possible for a large group of practitioners with a shared goal to engage in collaborative tasks. CMC provides an effective means to create an online platform in which students share ideas, discuss their own and one another's practices, and come to a different conception of their teaching styles. This kind of collaborative approach is more effective in enhancing teachers' professional development.

Technological developments have changed the concept of distance education from an isolated activity to a collaborative and student-centred learning. This is evident from the increasing number of public-sector open universities and dual-mode universities. Also, distance education institutions are effective in reaching audiences who could not meet their educational needs from conventional institutions. Distance education provides opportunities to student to interact with tutors, allowing open-ended discussions. "Many programme of teacher education, in all continents, have succeeded in enrolling students in significant numbers and a review of nine case studies found that pass rates were between 50 and 90 per cent" (UNESCO 2002c). Another example of adopting CMC as the core delivery means of teacher training can be found in the LearnLink project (<http://www.aed.org/learnlink>) supported by USAID and AED. Jung (2005:94-101) evaluated and concluded that "the project has implemented computer-mediated professional development programmes to improve training and support services for teachers in several developing countries."

In most of the developing countries, regular face-to-face study is only accessible to a few, and the majority wants to study at a time and location of their choice. "In addition, access to learning for those living in remote areas and those who are marginalized, isolated, or disadvantaged has to be sought vigorously as nations respond to the declaration made at Dakar in 2000" (UNESCO 2001). To meet these challenges, not only the barriers of time and distance need to be overcome but the social and the cultural constraints should also be taken into consideration. At the same time, the rapid changes taking place in the workplace require quick and up-to-date training. So, education and training must be high-speed, low-cost and capable of reaching all people who are desirous to continue education. CMC is a potentially powerful tool for providing educational opportunities to scattered and rural populations, groups traditionally excluded from education due to cultural or social reasons, such as women, persons with disabilities, and the elderly, as well as all others who for reasons of cost or because of time constraints are unable to get admission in on-campus programme.

CMC in support with distance education adds enormous value to the training of teachers. If there is an infrastructure alongside connectivity, the opportunity to create virtual online learning communities of teachers within nations and across regions is possible and beneficial. Practising teachers can share experiences, curriculum, learning materials and projects through such learning communities. There are three areas in which CMC can be applied: these are basic training, upgrading pedagogical skills and continuous professional development.

Pakistan has also taken a number of initiatives to introduce technology in all fields of life, particularly in education. The vision of the Pakistan IT Policy 2000 is “to harness the potential of Information Technology as a key contributor to development of Pakistan”. One of the goals of the policy is to ‘promote extensive use of IT applications in trade, industry, homes, agriculture, education, health, and other sectors with widespread use of Internet’ (GoP 2000).

In the National IT Policy, it has been emphasized that “determined efforts are essential to increase access to higher education for the under-represented groups. The strategy here will be two-faceted: first, to promote cultural change in instilling the value of higher education in the citizens; and second, to tackle the primary barrier of prohibitive costs of higher education. Distance education and open learning can play a major role in widening access” (GoP 2000). It further adds that “ICT must be effectively leveraged to deliver high quality teaching and research support in higher education, both on-campus and using [sic.] distance education, providing access to technical and scholarly information resources, and facilitating scholarly communication between researchers and teachers, and additional television channels should be dedicated to the delivery of high quality distance education programme.”

Realizing the importance of the Internet, the IT Policy and Action Plan emphasize that “the environment in which the Internet operates must be understood and regulated differently from traditional communication media”. For the growth of internet in Pakistan, three general principles should be adopted, which are “existing regulatory structures should not be forced on it, competition in Internet growth should be encouraged and unnecessary regulations should be avoided.” As for as provision and access to internet is concerned, it says that “to expand provision and use of the Internet in Pakistan, it is necessary to provide low-cost and reliable access to the international bandwidth, reliable local bandwidth connectivity, low-cost access to network equipment, widespread public access to

networked computers, a base of educated and trained users and providers and support for the development of national Internet content” (GoP 2000).

The CMC has made it possible to design, develop, deliver, manage, and assess the learning and training opportunities. Choice of technologies should be made, keeping in view facilities and constraints, ranging from power supply to availability of skilled technical and managerial support for the maintenance of technological infrastructure. After making available the technological infrastructure, pedagogical strategies, accessibility and cost should be considered while selecting the suitable technology.

The CMC-ELT Blended Learning Model does not project a new pedagogical framework but it enhances the previous models of learning by adding the component of technology with distance education to create a more cost-efficient way of bringing the learning environment to the learners. The CMC-ELT model has been designed keeping in view constructivist approach. The design and specification phase outlines a comprehensive set of authentic activities, tasks, scaffolding and support to be provided to the students. The CMC-ELT blended model has been developed as a standard model, bearing in mind the fields of English language teaching. It requires implementation within a general distance educational setting, taking into account the nature of the programme, the subject matter, the profile of the students, the support facilities and the educational technology available.

Interaction and participation are two basic elements of the CMC-ELT model in distance learning. Learners are encouraged to interact, not only with the teacher, but with one another. The tutor's role has included the role of a facilitator in an environment where interconnected students are expected to discuss meaning through multiple interactions. The interaction emerges when the students are engaged in an activity. “In highly learner-centred contexts such as research projects or key skills acquisition, the needs and goals of the learners are the first concern” (Beetham, et al., 2007:29). Both interaction and continuity lead to creative thinking by incorporating reflective and shared activities. Critical thinking is cognitive that naturally starts from the inside and looks out. On the other hand, self-directed learning is a complementary social model that takes on an outside perspective and looks in. Both are central to the CMC in general and in CMC-ELT model in particular.

The primary mode of communication in this model is text-based. There is significant evidence that writing has some inherent advantages over speech when engaged in critical discourse and reflection. One obvious advantage is the permanence of record of teaching and learning. The written word serves best to mediate, recall and reflect, while the spoken word functions most effectively to mediate action usually in face-to-face context. The characteristics of written language facilitate in higher-order learning through text-based media, such as chatting. Text-based communication for educational purposes also depends on environment of a community of learners.

The model presupposes that the students will engage with online text, supplementary reading materials and relevant websites. They will apply and negotiate the theoretical knowledge in the virtual classroom. Online forum is designed for peer interaction other than the weekly online tutorials. The tutor facilitates the students in their learning through chats in virtual classroom and instant messenger. Students are assigned tasks and assignments which are evaluated by the tutor.

Data Analysis

Data collected through mid-term, end-term questionnaires and focused group discussion are presented and discussed below.

Analysis of the Mid-term Questionnaire

The responses of the students are presented in percentile in the following graphs. The data not only provide responses of the students enrolled in online courses but a comparison of groups enrolled in 2007 and 2008 as well.

In response to the statement, 'I make good sense of other students' messages', 33.3% students expressed their opinion in both 'almost always' and 'often' categories. With improved strategies of individual and group tasks, the peer interaction improved in the second phase of the experiment, which is evident from Figure 3 that reflects that most of the students (76%) were able to make good sense of messages of other students in the chat room, message board and emails.

In response to the statement, 'other students make good sense of my messages', 29.6% and 40.7% of the students expressed their opinion in 'often' and 'sometimes' categories respectively. It also indicates that peer interaction was less.

However, situation improved in the second phase due to updated virtual learning environment and better interactive techniques adopted by the tutor that is evident from the students' responses (68% and 16% as almost always and often respectively).

Figure 3:
Make Good Sense of Other Students' Messages

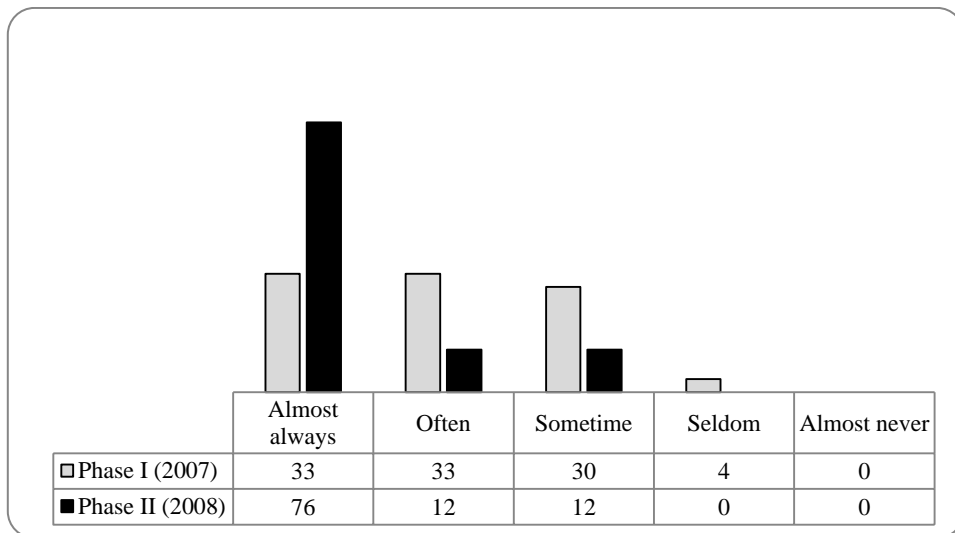


Figure 4:
Other Students Make Good Sense of Messages

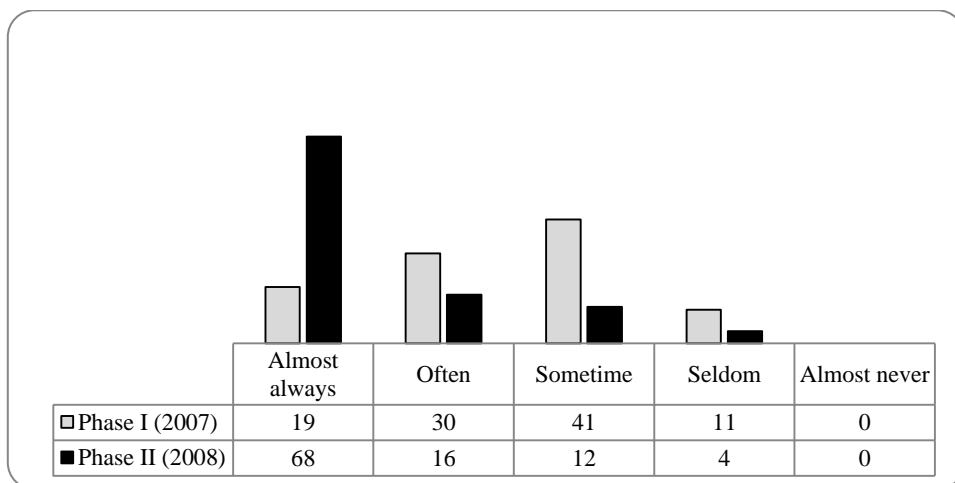
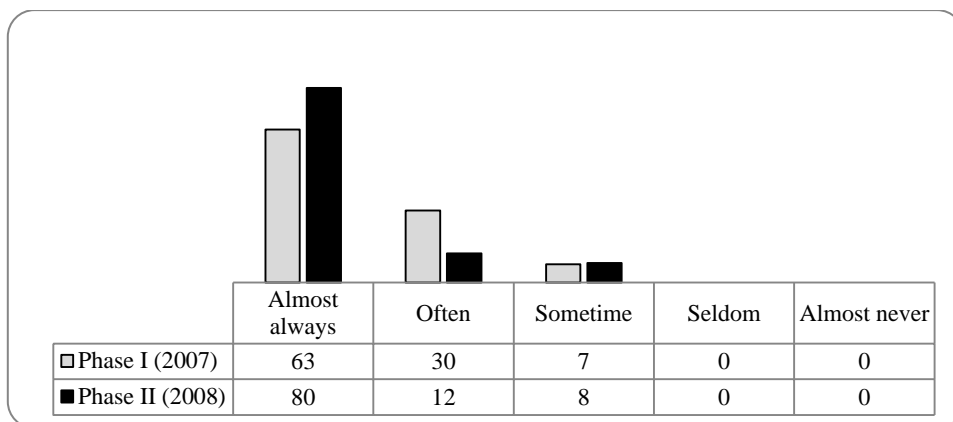


Figure 5:

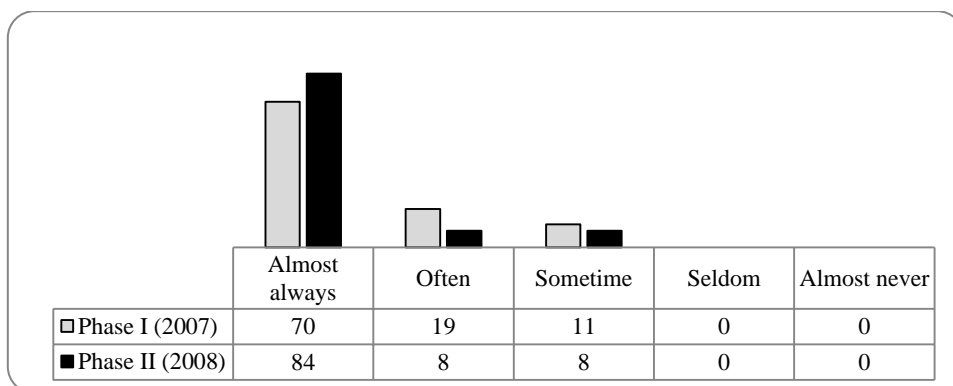
Make Good Sense of the Tutor's Message



In response to the statement, 'I make good sense of the tutor's message, 63.0% and 29.6% of the students in phase I expressed their opinion in 'almost always' and 'often' categories respectively. In phase II, ratio increased to 80% as 'almost always'. The reasons for this could be clarity of concepts and better communication skills on the part of the tutor.

Figure 6:

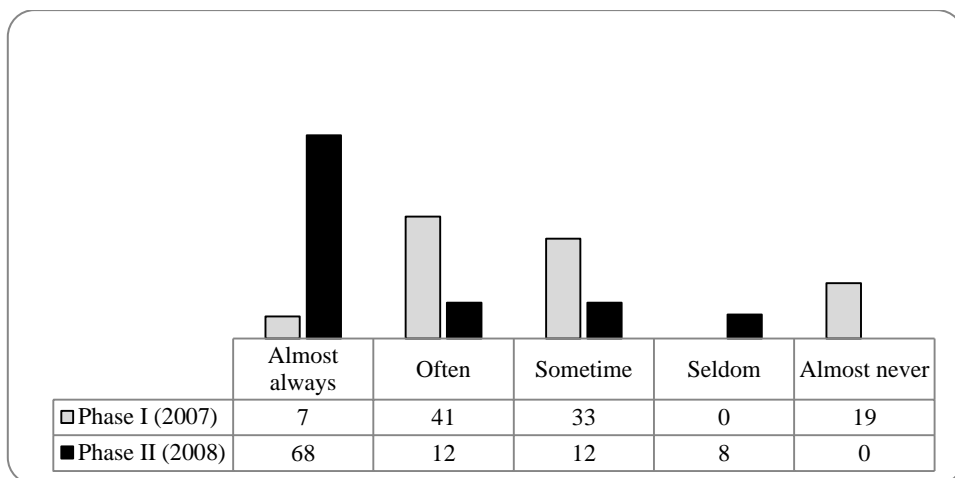
Tutor Makes Good Sense of Students' Messages



In response to the statement, 'the tutor makes good sense of my messages', 70.4% and 84% of the students in both phases expressed their opinion in 'almost always' category. The reason could be the tutor's proficiency in his subject matter and his role as a facilitator, etc.

Figure 7:

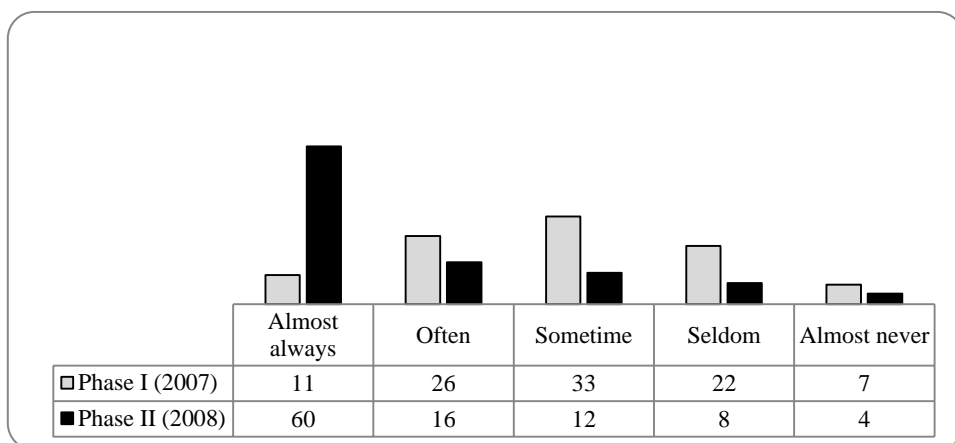
Other Students Encourage Participation



In response to the statement, ‘other students encourage my participation’, 48.1% of the students in phase I of the study agreed. It means that remaining students were not satisfied with the encouragement of their fellows. The reasons for this were problems in written communication, relevance of the comments with the theme of the discussion, clarity of question and comments, etc. In the second phase (2008), though there were some students who still faced the same problems but majority (68%) supported the statement as ‘almost always’.

Figure 8:

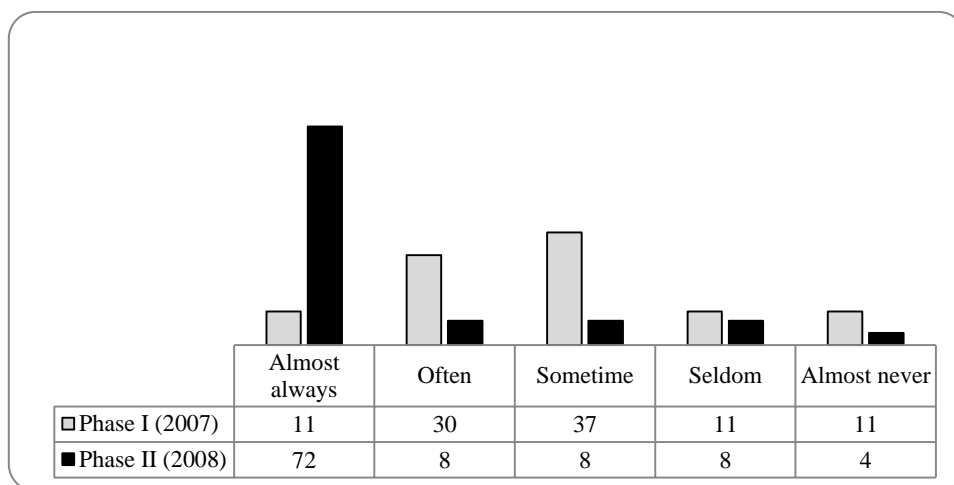
Other Students Praise Contribution



About 37.0% students in phase I agreed to the statement, 'other students praise my contribution'. It means that most of the students were not satisfied with their peers because their contribution was not acknowledged. The reasons for this could be that many students contributed at the same time during written interaction in a chat session. Sometimes, it happened that comments made by some of the students were ignored by their peers because flow of the discussion did not permit such acknowledgements. Mostly, the tutor had to pick up important points from the discussion, had to add his own comments to keep the discussion on track. In phase II, 60% student responded the statement as 'almost always' which reflects that the situation was better as compared to the phase I due to improvements in the instructional and interactional techniques adopted by the tutors as also mentioned by students in focused group discussions held after the experiment.

Figure 9:

Other Students Value Contribution



In response to the statement, 'other students value my contribution', 29.6% and 37.0% of the students in Phase I expressed their opinion in 'often' and 'sometimes' categories respectively. Attention was paid to peer interaction which is evident from the responses of the students (72%) in the second phase as 'almost always'.

In response to the statement, 'other students empathize with my struggle to learn, 37.0% and 37.0% of the students in phase I expressed their opinion in 'sometimes' and 'seldom' categories respectively. It was because of less

interaction among students. Previously described problematic areas contributed to less interaction among peers. Researcher observed the same problem in traditional classroom as well. However, improvement in situation is reflected in phase II as 52% students supported the statement as ‘almost always’.

Figure 10:
Other Students Empathize Struggle to Learn

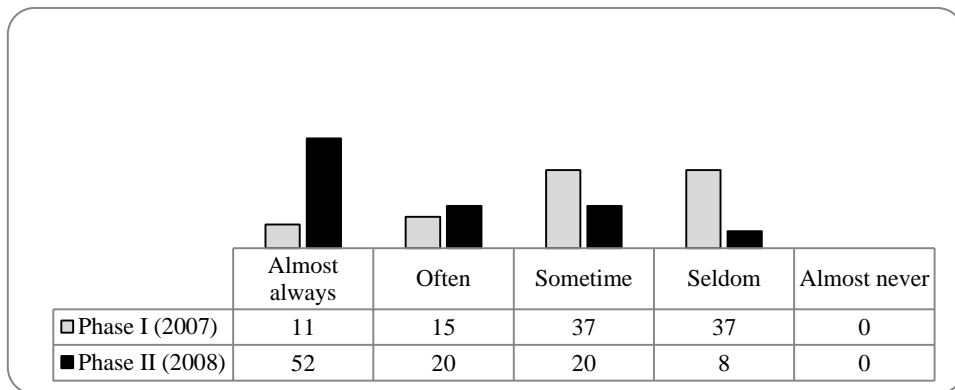
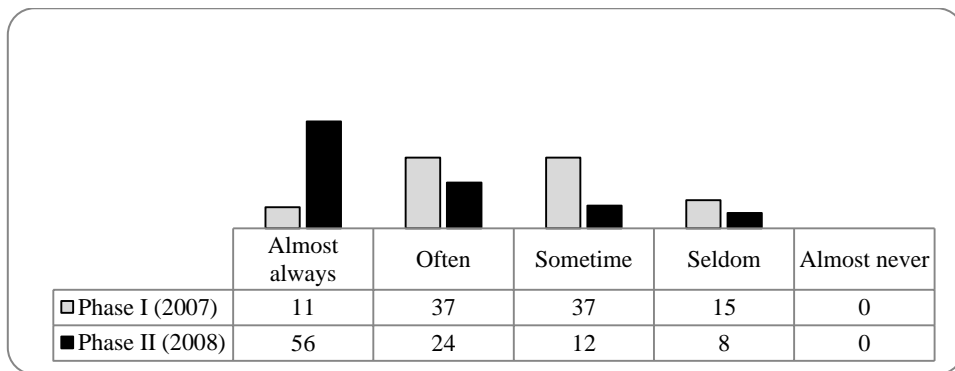


Figure 11:
Explain Ideas to Other Students

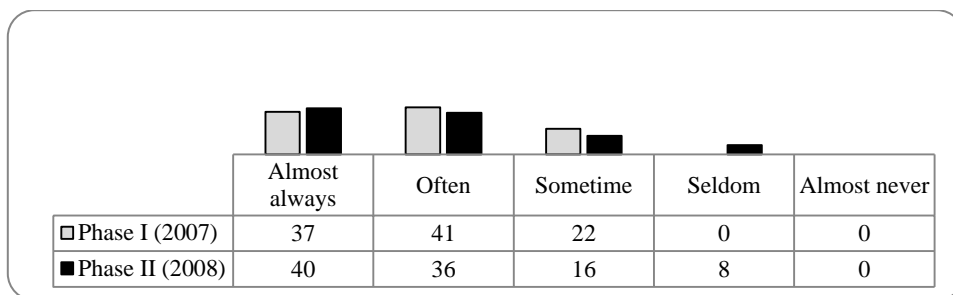


In phase I, 48.1% students agreed to the statement, ‘I explain my ideas to other students’. It showed that most of the students were not able to explain their ideas to their peers. The reasons for this could be change of media, fear of spelling and structural errors, slow typing speed, less familiarity with peers, shortage of time, etc. In phase II, 56% students agreed to the statement as ‘almost always’ which reflect that peer interaction improved and the students were able to

explain their point of view during discussions in virtual chat room, through bulletin board or emails to their fellows.

Figure 12:

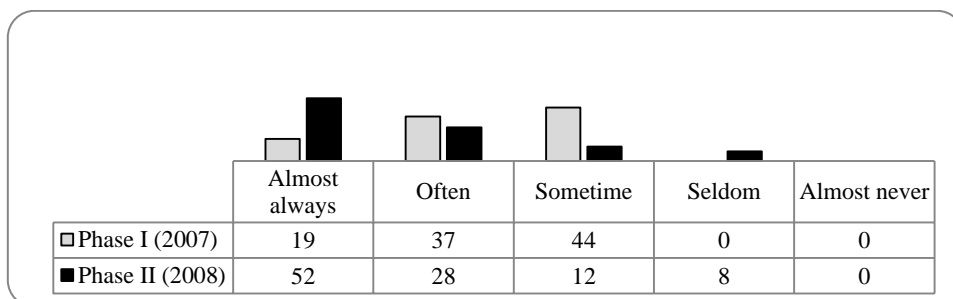
Ask Other Students to Explain Their Ideas



37.0% students agreed to the statement, 'I ask other students to explain their ideas'. In the chat room, only written discourse was possible, that's why most of the students were unable to express themselves due to time constraints and written communication limitations. It was really difficult for them to catch the ideas of one particular student and reply them. Another reason might be their active involvement with the tutor in ongoing discussion. In phase II, improvement is reflected through the responses of the students as 40% and 36% students mentioned categories 'almost always' and 'often' respectively.

Figure 13:

Other Students Ask to Explain Ideas

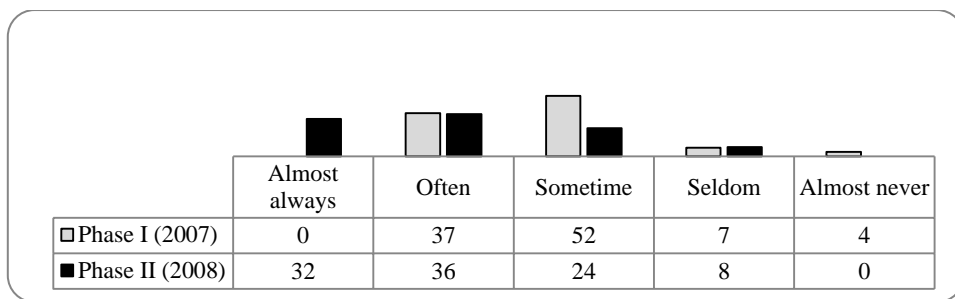


In response to the statement, 'other students ask me to explain my ideas', 18.5% and 37.0% students of the first group expressed their opinion in 'almost always' and 'often' categories respectively. The reasons for this could be slow typing

speed, less familiarity with peers, lack of interest in the question asked and time limitation. In the second phase, the situation improved slightly as reflected from the responses of the students as almost always (52%) and often (28%).

Figure 14:

Other Students Respond to Ideas



About 37.0% students agreed to the statement, ‘other students respond to my ideas’. The reasons for this could be time limitation, lack of interest, fear of written communication, typing speed, technical problems, etc. These problems were tackled in the second phase through instructional design and e-teaching strategies and interactivity in the second phase was 32% (almost always) and 36% (often).

Analysis of the End-term Questionnaire

Figure 15a:

Discussion in Online Sessions - Group I (2007)

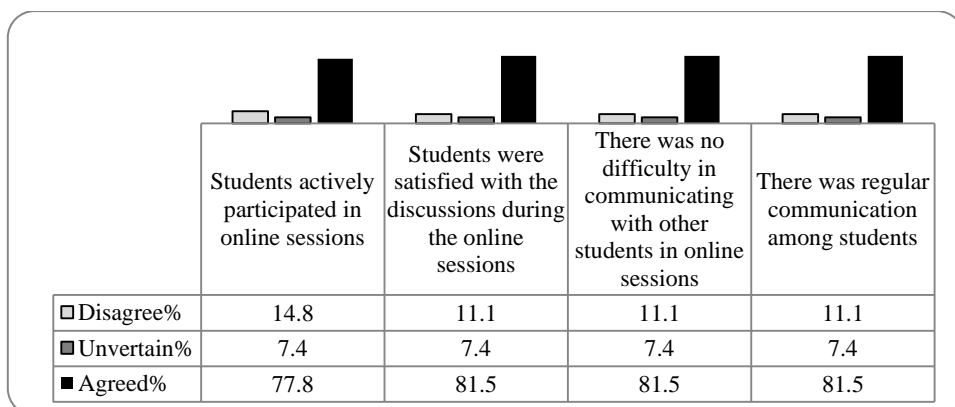
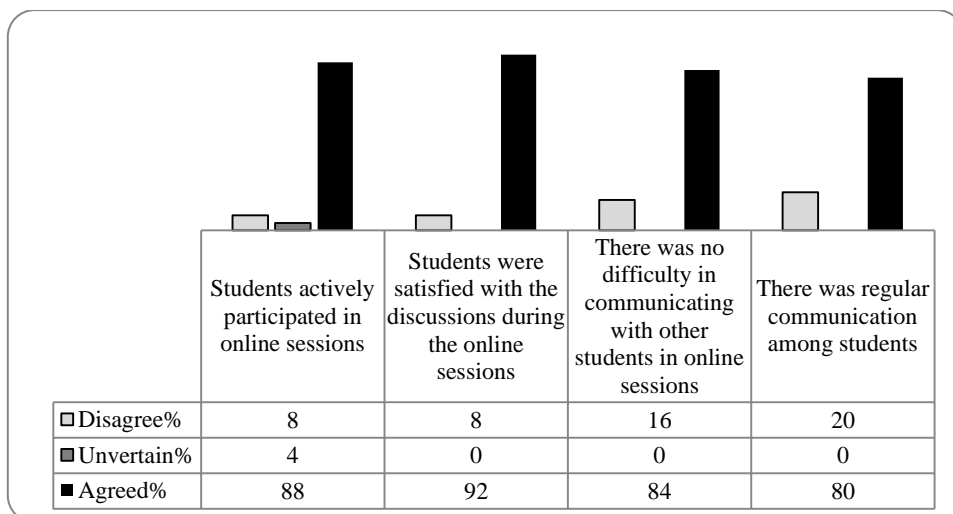


Figure 15b:

Discussion in Online Sessions - Group II (2008)



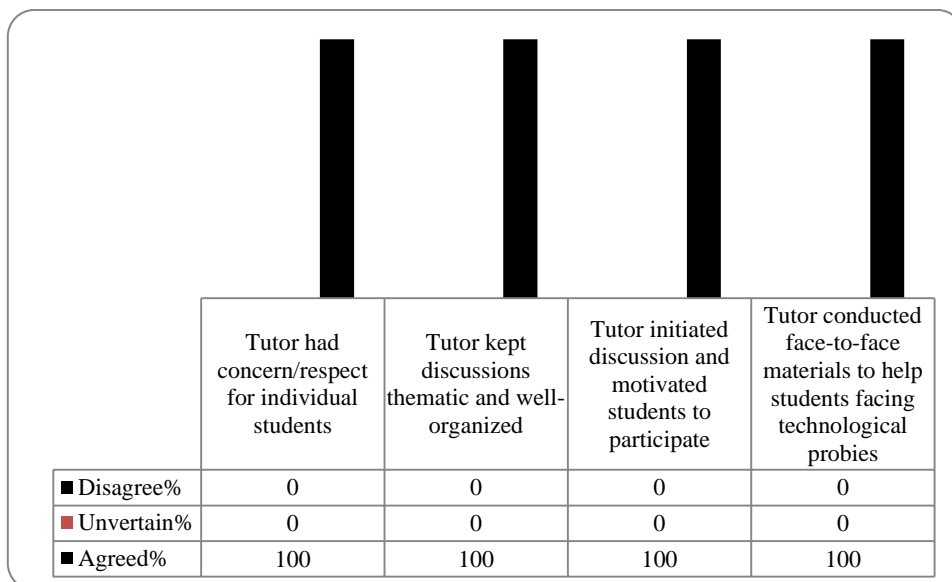
Students from both groups showed their concerns regarding active participation in online sessions and interaction among peers. Some of the students didn't participate in the online discussion actively for the reasons that they had slow typing speed, bad connectivity, power outages and psychological issues. These factors affected their motivation for active participation in online discussion. Besides these factors, social and cultural barriers hindered peer interaction. Different schedules of power supply failure/ power outages in different cities also affected schedule of online sessions. It also affected the motivation and continuity of discussions in online session as the students were coming in and going out due to power supply failure in their areas. However, the comparison of both groups reflects some improvement in interaction in the second phase of the study.

All the students in both the groups admitted reflect that tutor initiated discussions, motivated them to participate and kept the discussions thematic during the online sessions. It means that tutor-students interaction was effective. They also acknowledged that the tutor had concern/ respect for each of them. Realizing the problem of power supply failure/power outages, the tutor arranged makeup classes to avoid administrative problem of 70% compulsory attendance in tutorials. Tutor arranged presentation of projects in face-to-face mode for two

reasons; firstly, administrative requirement and secondly, to assess the performance of the students in comparison with the students studying in distance education mode. The students also acknowledged tutors' attitude and concern in focused group discussion.

Figure 16:

Tutor's role in Online Discussions - Group I and II (2007 and 2008)



Focused Group Discussion

Group I

“But there was one I think greater advantage that was you can not only ask your teacher but you can also discuss the problems with your own fellows. And in this way you can learn it easier I think easier than any other forum, share this in other training in other forum.”

“I experienced one day sir that you were not online and we were there and we were discussing even the assignments and different things and I think we were interacting with each other so I do not think so that in e-learning there is no interaction or things like that.”

Group II

“I think that it is a misconception actually when you are online you are actually with a group of people like mine sharing your ideas and giving their point of view and it is like your are in a company of so many people and it is not you ever feel isolated or lonely when you are chatting or taking online tutorials.”

“My experience was different because in the beginning when we were attending the tutorial I felt isolated because we don't know each other by face. Usually when we are sitting in class room we know each other by face. We are like friends but in online class, sometimes I felt the attitude of my peers very cold and controlled. In fact this is the first time that we are sitting altogether and we are having face to face interaction in this discussion but during online class in the beginning I felt a little isolated but usually when the time went on and we got interacted and we exchanged our e-mail addresses even our phone numbers that problem was solved afterwards.”

“I believe that even in a face to face session in a class room full of people, a person can be isolated if he wishes to cut himself off by not participating in discussions or not interacting with the peers. It is your choice basically, if you wish to interact you may interact while be it online be it at a class room.”

“I have to say that the experience was really enlightening and it was more different from the regular tutorials while because sitting at home it was very convenient first thing and the second thing I noticed that in regular tutorials sometimes every student does not get to participate and in online course every student was given a chance to give an output and all the questions that were asked from students were easily answered by the teachers and they were more acknowledged and that was more easier to understand so that was a very good experience.”

Findings and Conclusion

Majority of the students mentioned that tutor understood them and they understood tutor but at the same time they were critical to peer interaction. As the tutor was actively involved in the process and kept students involved in different kind of activities, tutor support was marked almost always. But peer support and interactivity also affected interpretation among students. It was

because of certain constraints of connectivity and electricity and being first time in the virtual classroom.

Less peer interaction was found among students in phase I. Many factors contributed to this problem which included written communication problems, relevance of the comments with the theme of the discussion, clarity of question and comments, personal and technical problems in computer skills, etc. However, situation improved in phase II due to improved instructional design and e-tutoring strategies.

Interactivity among students suffered problems in the first phase (2007). It was not up to the desired standards because of fear of written communication, technical problems in students' computer skills, time limitation and lack of interest in each other's ideas. However, the situation improved in the second phase (2008) after taking some measures to improve instructional design and e-teaching strategies.

The results of this study have major implications for design and practice of CMC-based distance education system in Pakistan. The integration of CMC with distance education system can effectively be done through blended model of learning. The blended model in distance education consisted of CMC-based interaction and face-to-face activities. The ratio of the blend may vary according to the nature of programme/ course, needs of the students and limitations of the institution. Moreover, the blended model of learning can also be used in traditional face-to-face setting keeping in mind the objectives of the institution and programme.

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