

A STUDY ON THE APPLICATION OF NICENET FOR  
LEARNING

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**PERPUSTAKAAN TUNKU TUN AMINAH**

**A STUDY ON THE APPLICATION OF NICENET FOR LEARNING**

**KANG SIAN LEE**

**This theses has been presented in partial fulfillment of  
The Master of Education in  
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**Faculty of Engineering Technology**

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**SEPTEMBER, 2002**



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**SPECIALLY DEDICATED TO MY BELOVED FAMILY, HANN  
AND FRIENDS.  
THANK YOU!**



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## ABSTRACT

The aim of this research is to investigate how KUiTTHO students use an online forum in the process of learning; how KUiTTHO students communicate with their lecturer and the socio-linguistic aspect of using an online platform. The participants of this research were students from Electrical Department who were taking the subject-Electric and Magnet subject in KUiTTHO. The number of the students in the sample class was 63. This research is a combination of qualitative and quantitative methods. The researcher used four methods in the data collection. They were interview, observation, content analysis and questionnaire. The online platform used to conduct this research was Nicenet. At the end of this research, the finding suggests that online classroom should be applied into the process of teaching and learning in institution of higher education in Malaysia such as KUiTTHO.

## ABSTRAK

Tujuan kajian ini dijalankan adalah untuk menyelidik bagaimana memanfaatkan pembelajaran melalui kelas maya; bagaimana pelajar-pelajar berkomunikasi dengan pensyarah dan aspek social dalam mengikuti kelas maya di kalangan pelajar-pelajar KUiTTHO. Peserta-peserta untuk pembelajaran melalui kelas maya ini ialah pelajar dibawah Jabatan Kejuruteraan Elektrik yang mengambil subjek -Elektrik dan Magnet. Bilangan pelajar di dalam kelas yang dipilih sebagai sampel kajian adalah seramai 63 orang. Kajian ini adalah kombinasi daripada kaedah kualitatif dan kuantitatif. Penyelidik menggunakan empat jenis kaedah metodologi iaitu: temuramah, pemerhatian, analisis kandungan dan borang soal selidik. “*Online platform*” yang digunakan dalam kajian ini ialah Nicenet. Di akhir kajian ini, dapatan menunjukkan bahawa pembelajaran melalui kelas maya harus diaplikasikan ke dalam proses pengajaran dan pembelajaran di Intitut Pengajian Tinggi Awam Malaysia seperti KUiTTHO.

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**CHAPTER I**



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## **CHAPTER I**

### **INTRODUCTION**

#### **1.1 Background of Study**

Recent developments in computer hardware, software, and communication technologies create exciting new opportunities for the educational use of these technologies. Throughout the history of human technologies, advances in technology have powered paradigmatic shifts in education (Frick, 1991). Technology changes both what we can do and what we decide is best to do and big shifts in culture cannot occur until the tools are available.

Development of the technology lead colleges and universities today in transition. Factors contributing to that transition are economic pressures from mounting costs, demands by the business world for graduates who are able to function in a knowledge society, and greater diversity among students who go on for higher education. The response of many institutions to these changes is the development of online learning. The online classroom is a potentially powerful teaching and learning arena in which new practices and new relationships can make significant contributions to learning. In order to successfully navigate the power of this medium in education, institutions must be trained not only to use technology, but also to shift the ways in which they organize and deliver material. This shift can maximize the potential for learners to take charge of their own learning process and can facilitate the development of a sense of community among learners. (Palloff, R. M and Pratt, K., 2002)



Nowadays, the internet already offers a great education a wealth of global information such as remote libraries, discussion groups, and computer conferences, but also connecting among students and between teachers and students beyond traditional classrooms. There are numerous cases documented in the past using computer-mediated communication (CMC) to connect a teacher and students at a distance or to facilitate active learning by implementing text based discussion among students outside the classroom. Successful integration of CMC into the curriculum, however, depends on one's ability to design and uses CMC applications that meet course goals, delivery goals or both. With the internet, students can be connected not only to the students on the same campus but also to those who are in different universities or even in foreign countries. Computer mediated communication (CMC) actually refers to any exchange of messages through electronic media that involves the use of computers, which encompasses: electronic mail, electronic bulletin board systems (BBS), news distribution systems and conferencing systems. In CMC, most communication is done in only textual mode, removing social contextual cues which are apparent in face-to-face communication.

The type of change enabled by computer mediated communication (CMC) does not just involve adding new technology to old ways of organizing teaching and learning (Moore, 1993). CMC promotes a type of interaction that is often lacking in the traditional teacher-based classroom. It allows learners the freedom to explore alternative pathway to find and develop their own styles of learning. Computers are not a threat to the teacher (although the role of the teacher must change when using them), but computers may threaten the chalkboard. Computer technologies allow professionals to share with students tools that being used daily. Further, educators can also provide guidance to help students develop meaningful ways to construct their own knowledge.

## 1.2 Statement of Problems

It cannot be denied that technology has advanced rapidly over the last few years. With ever increasing amount of information for students to process, it is no longer acceptable for colleges and universities to only teach facts. These educational centers are being challenged to equip students with the skills necessary to be life- long learners. The focus now is to develop students' reasoning skills so that they can synthesize, analyze and integrate material in the process of learning. To meet these challenges, many faculties have moved away from a teacher-centered, lecture format for dispensing knowledge to a collaborative, students centered environment for creating knowledge.

From an interview done with the students who are now studying in KUiTTHO (2002), the researcher found the following problems faced by them while they were studying in KUiTTHO.

- They felt that traditional way of learning consumed a lot of time.
- They were shy to express their opinions in class.
- The Internet and computer facilities provided were not enough.
- They spent a lot of money and time in printing and binding the assignments.
- They faced problems in getting extra reading materials for lack of books in the library and also the books were not the latest.
- They felt that traditional way of teaching was not appropriate with modern times but it depended on subjects taught.

In this research, the researcher wanted to investigate whether the application of online classroom such as in the teaching and learning process among KUiTTHO students will bring benefit to the teaching and learning process.

### **1.3 Purposes of the Study**

The purposes of the research are:

1. To investigate how KUiTTHO students use an online forum in the process of learning.
2. To investigate how KUiTTHO students communicate in a virtual environment..
3. To investigate the socio-linguistic aspect of using an online platform among KUiTTHO students.

### **1.4 Research Questions**

The research questions of the research are:

1. Does the use of an online platform help KUiTTHO students in understanding their study?
2. What is the trend of students-students communication?
3. How do they behave inside and outside the online classroom?
4. What were the topics discussed by KUiTTHO students inside the online classroom?

### **1.5 Limitations of Study**

Sample of the research is the chosen class in KUiTTHO. The subject chosen in conducted an online classroom is Electric and Magnet. Due to the limitation of time, the experiment was only carried out with the students for about eight weeks.

## **1.6 Definition of Terms**

### **1.6.1 Computer Mediated Communication (CMC)**

CMC signifies the ways in which telecommunication technologies have merged with computers and computer networks to give us new tools to support teaching and learning. CMC describes the ways we humans use computer systems and networks to transfer, store, and retrieve information.

### **1.6.2 Face-to-Face (F2F) Communication**

Face-to-Face is a direct way of communication. It is considered essential in effective outcomes in business, education and personal relationships (Irani, 1998). In this research F2F communication refer to the communication between students and lecturer in the normal class.

### **1.6.3 Computer Conferencing**

From a behavioural perspective Computer conferencing allows for interactive, though not real time, group communication, group learning or group decision making. From a technical perspectives computer conferencing refers to a type of networked computer software that facilitates structured asynchronous communications accessed by a personal computer via a computer network or modem.

#### **1.6.4 Nicenet**

Nicenet is a free web server that hosts classrooms on the internet. By using Nicenet, an instructor may create a classroom, post topics, run discussion groups, add informational links, make announcements and so forth.

#### **1.6.5 Collaborative Learning**

An instruction method in which students work in group toward a common academic goal. Collaborative learning processes assist students to achieve deeper levels of knowledge generation through the creation of shared goal, shared exploration and a shared process of meaning-making. In this research, collaborative learning refers to learning process through online classroom.

#### **1.6.6 Autonomous Learning**

Autonomous learning is self managed learning. It means that the learner has much of the responsibility for planning and organizing their learning, for doing it, for assessing its value to him or herself and even for suggesting the mark that the work produced should get. In this research, autonomous learning refers to the topics of conferencing that being posted by the participants of the class shows that they are learning independently.



### 1.6.7 Authentic Learning

Authentic learning says that... we should learn what happens in the 'real world', and become cognitive apprentices to the expert. It allow students to explore, discover, discuss, and meaningfully construct concepts and relationships in contexts that involve real world problems and projects that are relevant and interesting to the learner.

In this research, authentic learning refers to the topics which are related to their real life that being discussed by the students inside the Nicenet.



## CHAPTER II



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## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

According to Berge and Collins (1995), computer Mediated Communication (CMC) is changing instructional methods in several ways, including: (1) generating improved technological tools that allow classes to use fuller range of interactive methodologies, and (2) encouraging instructors and administrators to pay more attention to the instructional design of courses. Both of these factors can improve quality, quantity and pattern of communication in the skills students practice during learning.

Berge and Collins (1995) also stated that educators often categorize the use of CMC in three ways: for conferencing, informatics and computer assisted instruction (CAI). Computer conferencing provides e-mail, interactive messaging, and discussion. Informatics include library online public access catalogs (OPACs), interactive access to remote databases, program/ data archive sites, campus wide information systems (CWIS), wide area information systems (WAIS) and information managers, such as Gopher and Veronica. In CAI, the computer is used to structured and manage both the presentation of information and the possible responses available to the human user.

## **2.2 Uses of Computer Conferencing, Informatics and Computer Aided Instruction (CAI)**

The uses of computer conferencing, informatics and CAI are:

- ☛ Mentoring such as advising and guiding students.
- ☛ Project based instruction, either within the classroom or in projects involving community, national or international problem solving.
- ☛ Didactic teaching that is supplying course content, posting assignments, or other information related to course work.
- ☛ Retrieval of information from online information archives such as OPACs, ERIC and commercial databases.
- ☛ Interactive chat used to brainstorm with teachers or peer and to maintain social relationships.
- ☛ Facilitating collaboration
- ☛ Individual and group presentations.
- ☛ Practice and experience using emerging technologies that may be intrinsically useful in today's society.

## **2.3 Computer Conferencing**

Computer conferencing involves using computers for communications between the members of a group. In the context of higher education, students would typically use a computer to take part in a discussion of issues relevant to their course, with their lecturer acting as moderator of the discussion. Such a description would include the fashionable concept of video conferencing in which all participants are involved at the same time from different locations. However, the form of conferencing discussed here relies on much less advanced technology, with the advantage that it can be implemented on many more computers and allows students to participate without time constraints.

From a behavioral perspective computer conferencing allows for interactive, though not real time, group communications, group learning or group decision making. Participants send messages to a discussion area called a conference and an electronic conversation develops when users send new messages or responses to existing ones. While, from a technical perspective computer conferencing refers to a type of networked computer software that facilitates structured asynchronous communications accessed by a personal computer via a computer network or modem.

### **2.3.1 How Can Computer Conferencing Be Used?**

- ☆ For collaborative learning - it is because computer conferencing is well suited to group discussions, online seminars, learning partnership and debates.
- ☆ For active learning – by its very nature the online communications environment promotes user contributions and debate as well as encouraging students to take greater responsibility for their own learning outside timetabled activities.
- ☆ For interactive learning – to promote discussion and information exchange between students located both on and off campus.
- ☆ For more equitable distribution of communication – everyone has an equal opportunity to express themselves and no one can easily dominate the discussion.
- ☆ For reflection – in contrast to face-to-face communication computer conferencing allows participants more time to think, research and reflect before they respond.



### 2.3.2 Why Use Computer Conferencing?

According to Shell (1994), the online educational model enhances traditional methods in five ways:

1. Text based: Forces people to focus on the message, not the messenger. It can makes thinking tangible and it is socially equalizing because everyone appears the same in text.
2. Asynchronous: The 24 hour classroom is always open. This will give students plenty of time for reflection, analysis and composition.
3. Many To Many: Learning groups of peers facilitate active learning, reduce anxiety, assist understanding and facilitate cognitive development.
4. Computer Mediated: Encourages active involvement as opposed to the passive learning from books or lecturer. Besides that, it allows interconnecting and integrating new ideas.
5. Place Independent: Not constrained by geography.

### 2.4 Face-To-Face (F2F) Communication versus Computer Mediated Communication (CMC)

Culturally, F2F communication is considered essential in effective outcomes in business, education and personal relationships. With the growth of the internet and its vast array of uses for entertainment, information and education, one has to question whether online communication (CMC) is as effective as face-to-face (F2F) communication. Communication is an essential part of learning. In an online learning environment, there are far more types of communication available than in a F2F classroom. These include:

- One-to-one communication: students communicate privately with one another.
- One-to-many communication: students conduct online presentations, email the entire class, submit announcements or questions to the group.

- **Many-to-one communication:** responses or feedback to messages or assignments posted on a discussion forum.
- **Many-to-many communication:** mailing lists, video conferencing, synchronous interactive chats.

In the text-based learning environment, where communication transpires without benefit of the physical presence of the participants, there lines of communication that transcend the written words exchanged and messages that lurk between the lines of text? In fact, there is much more to online communication than simple words or conversation, which can be learned by students. People verbalized their feelings in text, use emoticons (faces drawn in the text for happy, sad, etc), emotes (S for Smile, etc), word choice, punctuation and capital letters. All of these are ways to personalize textual communication online. Online communication in learning environments can be enhanced using such methods as peer-to-peer communication, discussions, group work, conferencing and simulations. Interaction among students and instructors continues to grow as technology continues to advance.

## **2.5 Advantages of CMC Over F2F**

There are many advantages of CMC over F2F for students and instructors. Even in traditional F2F classroom, integrating some online learning allows students to enjoy the benefits of CMC in learning. The advantages include:

1. The ability to time shift interaction, so that one can send and receive messages and stay in communication regardless of the time of day or physical location, may be received as real advantages in group work and practice assignments.
2. Interactive advantages which include first and foremost, humor. Online surveys reveal that humorous messages are the most highly appreciated types of messages in computer mediated environments.

3. Hyperpersonal interaction, which allows students to participate in multiple simultaneous exchanges. Students are able to “multitask” or interact in several different online environments at the same time.
4. Ability to carry discussions irrelevant of time and distance. In CMC, students also have the advantage of being able to reflect before, during and after exchanges of information and ideas in the online learning community.

## 2.6 Learning Styles

According to Dewar, Hartman and Leadership Project (Dewar 1995; Hartman 1995, Leadership Project 1995) cited from Blackmore (1996), the education literature suggests that students who are actively engaged in the learning process will be more likely to achieve success. Once students are actively engaged in their own learning process they begin to feel empowered and their personal achievement and self-direction levels rise. A key to getting students actively involved in learning lies in understanding learning styles preferences, which can positively or negatively influence a student's performance. It has also been show that adjusting teaching materials to meet the needs of variety of learning styles benefits all students.

Schroeder (1996) points out that the “typical” students learning style profile is changing on campuses today and there is a much greater variation in the range of learning style preferences to be considered. Therefore it would be wise to understand what learning style preferences are and how to address them when preparing instructional materials for adults (Blackmore, 1996).

## 2.7 Differences Between Men's and Women's Learning Styles

Not only do adults have different learning styles than children, but men and women do not approach the world of 'thinking' in quite the same way. In 1968, William Perry did a study of undergraduate New England college male students. From this study he determined that young men pass through a development sequence in their thinking modes. Perry isolated nine stages in the sequence, but in outline the stages form this pattern (Bodi 1988; Cranton 1992, 47; McNeer 1991) cited from Blackmore (1996).

## 2.8 Perry's "Development Process"

1. Male students see the world as black and white, right or wrong. They are convinced there is one right answer.
2. Male students see there is diversity of opinion, but feel that authorities that describe diversity are poorly qualified, or just "exercising students" so students will be forced to find the "right answer" themselves.
3. Male students begin to feel that diversity is temporary. They feel that maybe the "right" answer just hasn't been found yet.
4. Male students understand that diversity is a legitimate state, but they would still prefer to know what is "right"
5. Male students see that everyone has a right to his or her own opinion.

Nearly 20 years later, Belenky et al. wondered how women fit into this 'male' scale. In their 1986 study they discovered that women indeed do have different "way of knowing". Belenky et al. found that women have the following possible "way of thinking." (Blackmore, 1996).

## 2.9 Belenky et al. “Women’s Ways Of Knowing”

- ❑ Silence: women students feel mindless and voiceless, subject to whims of external authority.
- ❑ Received knowledge: women students feel they can receive knowledge but not create it.
- ❑ Subjective knowledge: truth and knowledge are private and subjectively known or intuited
- ❑ Procedural knowledge: women students are invested in learning and applying objective procedures for obtaining and communicating knowledge.
- ❑ Constructed knowledge: women students view knowledge as contextual and can create knowledge found objectively or subjectively.

## 2.10 Collaborative Learning

The concept of collaborative learning, the grouping and pairing of students for the purpose of achieving an academic goal, has been widely researched and advocated throughout the professional literature. The term of collaborative learning refers to an instruction method in which students at various performance levels work together in small groups toward a common goal. The students are responsible for one another’s learning as well as their own. Thus the success of one student helps other students to be successful.

Proponent of collaborative learning claim that the active exchange of ideas within small groups not only increases interest among the participants but also promotes critical thinking. There is persuasive evidence that cooperative teams achieve at higher levels of thought and retain information longer than students who work quietly as individuals. The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning and thus become critical thinkers. The advances in technology and changes in the organizational



infrastructure put an increased emphasis on teamwork within the workforce. Workers need to be able to think creatively, solve problems and make decisions as a team. Therefore, the development and enhancement of critical thinking skills through collaborative learning is one of the primary goals of technology education.

### **2.11 Computer-Mediated Collaborative Learning: An Empirical Evaluation**

An objective of the study did by Maryam Alavi was to go beyond the traditional classroom instructional modes (e.g, lecturers and class discussions) to develop and evaluate computer supported pedagogical approaches. More specifically, this study investigates whether the use of a group decision support system (GDSS) in a collaborative learning process enhances student leaning and evaluation of classroom experiences.

The findings of a study involving 127 MBA students indicates that GDSS supported learning leads to higher levels of perceived skill development, self-reported learning, and evaluation of classroom experience in comparison with non GDSS supported collaborative learning. Furthermore, the final test grades of the group of students who are exposed to GDSS supported collaborative learning were significantly higher than those of the other group of students who participated in the experiment.

### **2.12 Asynchronous Computer Mediated Communication versus Face-to-face Collaborative: Results on Student Learning, Quality and Satisfaction**

Research done by Rosalie J. Ocker and Gayle J. Yaverbaum in year 1999 stated that although there has been more than a decade of literature on computer-mediated communication in education, the research has been unclear as to whether it is an effective replacement for face-o-face (F2F) collaborative. This study sought to add to

this body of research by exploring the effects of two modes of collaborative on student groups. Each student group collaborated on two case studies, one using face-to-face collaboration and the other using asynchronous computer conferencing technology as a mean of collaborative. Empirical findings indicate that asynchronous collaborative is as effective as face-to-face collaborative in terms of learning, quality of solution, solution content, and satisfaction with the solution quality. However, students were significantly less satisfied with the experiences, both in terms of the group interaction process and the quality of group discussions.

### 2.13 Ethnography

In Writing @ CSU (1997) ethnography refer is a long term investigation of a group (often a culture) that is based on immersion and optimally, participation in that group. Ethnography provides a detailed exploration of group activity and may include literature about/ or by the group. It is an approach which employs multiple methodologies to arrive at a theoretically comprehensive understanding of a group or culture.

According to Cook, N. (2000), ethnography refers to fieldwork-based research that examines the behavior and form of institutions, social interaction and exchanges, and the creation and use of meaning in particular and limited social contexts. An important goal of ethnography is to enable understanding and insights to independently and spontaneously grow out of the social setting that is being studied, rather than to approach the setting with a predetermined hypothesis or theory that must be empirically proved or disproved. Almost all ethnographic research involves context specific research, where the researcher attempts to understand, describe, and interpret the complex of institutions, people, and behaviors that characterize the study setting by immersing herself in them.

The classic methodology of ethnographic fieldwork is the taking of fieldnotes, first-hand observations recorded in the field, and the repeated rewriting, rereading and recontextualizing of these notes. Fieldnotes form the “hard” data from which ethnographies are written, but they are often idiosyncratic and highly personalized. In this sense, they are more like log books or diaries than the kind of data collections that scientific or quantitative researchers would consider “hard” and find useful. In addition to fieldnotes, ethnographers use “headnotes,” or the sum of experience, memory, and schematized knowledge carried in their minds to critically shape the use and application of accompanying written records. In addition, other media, such as film, video and audio recordings, have been used to record field data, and are often carefully edited to create new and contrasting perspectives on old subject matter.



**CHAPTER III**



## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Approach**

This chapter focus on the research design, procedures and instruments involved in the research. This research is a combination of qualitative and quantitative methods. The role of qualitative research is to tell us why, while quantitative research tells us how many. Qualitative research describes phenomena in words instead of numbers and it should be used when the researcher really wants to understand in detail why an individual does something (Hoepfl, 1997). The report of qualitative research might be case studies, descriptive models, and tentative hypotheses requiring further testing.

There are different goals between qualitative research and quantitative research. Qualitative is not designed to prove a specific point but it is designed to expand theory. Quantitative research is all about quantifying the relationships between variables. The primary reason for conducting quantitative research is to learn how many people in a population have or share a particular characteristic or group of characteristics. It is specifically designed to produce accurate and reliable measurements that permit statistical analysis. Quantitative research is appropriate for measuring both attitudes and behavior. According to Hopkins (1998), the aim of quantitative research is to determine how one thing (a variable) affects another in a population. Quantitative

designs are either descriptive subjects measured once) or experimental (subjects measured before and after a treatment).

### **3.2 Participants of the Research**

Participants of the research or the samples for this research were the first year Diploma students in one of the class's at KUiTTHO under Electrical Department (1 DKE) who was taking subject Electric and Magnet. There were 63 students in the chosen class. The sampling technique in choosing the sample for the research is purposeful sampling. According to Patton (1990), purposeful sampling means "selecting information-rich cases for study in depth". There are several strategies that can be used to select information-rich cases for study. The sample used in this research is homogeneous samples. The purpose of using homogeneous sampling in this research is to describe the implications of using Nicenet in the teaching and learning process for one group of students at KUiTTHO and to describe the particular subgroup in depth. The chosen KUiTTHO students were taking the same subject (Electric and Magnet) and in the same education level (diploma).

### **3.3 Data Collection**

According to Cook, N (2000), almost all the ethnography research involves context-specific research, where research attempts to understand, describe, and interpret the culture and behavior of a group of people. In this research, the qualitative data collections fulfill the classic methodology of the ethnography that is observation, interview and content analysis.

Qualitatively, the data of this research was the topics discussed by the participants in my\_class and it will be identified using content analysis method. The



data was also collected through observations by the researcher over a period of time in the online classroom conducted. Besides that, the responses of the participants inside the online classroom were noted. Quantitatively, the data was collected through the distribution of a set of questionnaires. So, in this research there were four types of data collection used; interviews, observation, content analysis and questionnaire.

### **3.3.1 Interview**

According to McNamara (2002), interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around a topic. Interviews may be useful as follow-up to certain respondents to questionnaires.

In this research, interview was first conducted among some students who are studying in KUiTTHO before carried out his study. The purpose of this interview was to collect information about the environment and computer facilities provided by KUiTTHO. Through the interview, the researcher also got further information regarding the problems faced by the students in their teaching and learning process as mentioned in the statements of problems. By this interview too, the researcher managed to understand the situation at the institution and plan how to conduct the research.

According to Mohamad Najid Abdul Ghafar (1999), the advantages of using interview are:

- Interview method is flexible because the interviewee can explain the details of something that the interviewer is not sure.
- The interviewer can observe the behaviors of the interviewee and can make decision about certain aspects by observing the reaction given by the interviewee.

- Just like in the normal communication method, both parties can exchange their own explanation and opinion.

While the disadvantages of interview are:

- Interview method may take a long time.
- There is no standard way in comparing the answer from different interviewees.
- Some interviewee tends to explain something that is not true about them.
- If the interviewer cannot write fast, then the interviewer has to think of other technology such as tape recorder in order to record the whole process of interview.

On the other hand, informal interviews were also conducted throughout the period of the times when the online classroom was carried out. The researcher hoped that the informal interviews would give a briefly information about problems faced by the students, what they preferred while they are studying, what they had learnt inside the online classroom and how the online classroom benefits them in their learning process.

### **3.3.2 Observation**

Observation is a method of collecting data by human, mechanical, electrical or electronic means. Observation method is also known as a method that is called fieldwork.

In this research, observation was carried out during the period when the online classroom was being conducted. The researcher observed the behaviors of the participants inside and outside the online classroom and investigated how far they liked to use online classroom for learning purposes through their responses. The researcher

encouraged the students to participate in the online classroom continuously by posting information related to the technical subject or created interesting topics that are related to student's life. After introducing and making sure all the students already participated in the online classroom, the researcher then will be the instructor and observer to that online classroom.

According to Joppe (2002), there are six different ways of classifying observation methods:

1. Participant and non-participant observation, depending on whether the researcher chooses to be part of the situation she or he is studying.
2. Obtrusive and unobtrusive (or physical trace) observation, depending on whether the subjects being studied can detect the observation.
3. Observation in natural or contrived settings, whereby the behavior is observed (usually unobtrusively) when and where it is occurring, while in the contrived setting the situation is recreated to speed up the behavior.
4. Disguised and non-disguised observation, depending on whether the subjects being observed are aware that they are being studied or not. In disguised observation, the researcher may pretend to be someone else.
5. Structured and unstructured observation, which refers to guidelines or a checklist being used for the aspects of the behavior that, is to be recorded. For instance, noting who starts the introductory conversation between two tour group members and what specific words are used by way of introduction.
6. Direct and indirect observation, depending on whether the behavior is being observed as it occurs or after the fact, as in the case of TV viewing, for instance, where choice of program and channel flicking can all be recorded for later analysis.

The advantages of observation according to Mohamad Najid Abdul Ghafar (1999) are:

- We can observe something that we did not expect in our early planning

- If the observer already determines the behaviors that he or she wanted to observe, this will make the observation session a lot easier.

The disadvantages of observation according to Mohamad Najid Abdul Ghafar (1999):

- It may take a long time for the observation session if we do not have a list of behaviors that we are expecting from the participants
- If we take too much time in making decision whether to write down the data or not, we may miss other behaviors that are more important
- If field notes is not been taken systematically, we will face the problem in the analysis part
- Existing of bias in observation. For example is the observer already has his or her own assumption by stereotyping the behaviors and already make the conclusion before the observation session.

### 3.3.3 Questionnaire

Questionnaire is a formal approach to measuring characteristics, attitudes, motivations, and opinions as well as past, current and possible future behaviors. The information produced from a questionnaire can be used to describe, compare or predict these facts. In this research, a set of questionnaire was distributed among the participants after the fifth week of participating in the online classroom. The questionnaire was used in conjunction with interview and observation method because it alone cannot explain more about the detailed information to the answer of the respondents except those stated in the questionnaire.

The questionnaire in this research was adapted from those used by Berhannudin (2000). It is divided into three sections, which are section A, section B and section C according. Section A is for getting demographic data of the respondents. In section B, the questions focussed on the research question number 1, number 2 and number 3.

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