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SUPPORT FROM A DISTANCE: PERCEPTIONS OF MALAYSIAN STUDENTS ON COMPUTER MEDIATED COLLABORATIVE LEARNING

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ABSTRACT

The aim of this paper is to report findings from an on-going research using Computer-supported Collaborative Learning in an ESL classroom in Malaysia. Collaboration is the act of working together to produce a piece of work. Collaborative learning deals with instructional methods that seek to promote learning through collaborative efforts among students working on a given task. Class based CL fits well with the philosophy of teaching: working together, building together, learning together, changing together and improving together. Computer-supported CL (CSCL) has an impact on the development of deep thinking about ideas as students are engaged in writing rather than talking. By doing so, they have more time to think about the responses; able to engage in developing arguments; have time to follow up references and read literature, etc. Selected students from Malaysia were asked to work collaboratively (through e-mail) with students from the USA. At the end of the collaborative activities they were expected to complete written projects. The students were interviewed on their perceptions on this innovative way of learning. The findings indicate that the students have responded positively towards computer supported collaborative learning.

Keywords: Collaborative learning, computer-supported collaborative learning, ESL classroom, Class based CL.

INTRODUCTION

Collaboration is the act of working together to produce a piece of work. Collaborative learning deals with instructional methods that seek to promote learning through collaborative efforts among students working on a given task. Class based CL fits well with the philosophy of teaching: working together, building together, learning together, changing together and improving together. Computer-supported CL (CSCL) has an impact on the development of deep thinking about ideas as students are engaged in writing rather than talking. By doing so, they have more time to think about the responses; able to engage in developing arguments; have time to follow up references and read literature, etc.

The purpose of CSCL is to scaffold or support students in learning together effectively. It is based on the promise that computer supported systems can support and facilitate group process and dynamics in ways that are not achievable by face-to-face, but it is not designed to replace face-to-face communication.

This article will discuss the students' perceptions in producing their written projects using computer supported collaborative learning in ESL writing.

COMPUTER SUPPORTED COLLABORATIVE LEARNING: A Review

Depending on the type of collaborative tasks to perform Computer Supported Collaborative Learning (CSCL) could be employed to address concept learning, problem solving and designing. CSCL focuses on what is being communicated and is used in the educational setting. The purpose of CSCL is to scaffold or support students in learning together effectively.

Gokhale (1970) examined the effectiveness of individual learning versus collaborative learning in enhancing critical thinking skills and drill-and practice skills. Results of the performances of these two groups showed that students who participated in collaborative learning had performed significantly better on the critical-thinking test than students who studied individually. It was also found that both groups did equally well on the drill-and-practice test. This result is in agreement with the learning theories proposed by proponents of collaborative learning. From here, it can be concluded that collaborative learning develops critical thinking through discussion, clarification of ideas, and evaluation of others' ideas.

An exploratory study was carried out by Ragoonaden and Bordeleau (2000) to observe and research two undergraduate university courses offered via the Internet. Students were asked to identify how they were able to interact with their computer according to choice, sensory, temporal and usage. An analysis of the e-mail messages indicated that the following collaborative mechanisms were used: explaining concepts, sharing of work, compromise, encouragement and socialization. These students were also interested in the Internet and the various communication and research tools available. For these students, distant learning via the Internet and the collaborative assignments were successful and had enhanced their learning and provided them with a network of help stemming from their peers and their professor.

As for CMC, collaborative learning is seen in a different angle. CMC has an impact on the development of deep thinking about ideas creatively and critically. Harasim et al (1985) and Mason & Kaye (1989) suggest that if participants are engaged in writing, rather than talking, they are able to attain a higher level of analysis of ideas. There are a number of reasons why this might be the case. Students have more time to think about the responses before the write to respond. By that they are able to engage in developing arguments, have time to follow up references and read literature.

Their responses can be more detailed and argumentative within that time. Contributions of ideas can be seen as being more objective and anonymous and also there is a group record of the debate that can be used as an accurate reference at a later date if needed (such as the assignment stage). CSCL is about the topic that is being communicated through interaction and is used in the educational setting.

The purpose of CSCL is to encourage and support students to learn together effectively but is not the same as face-to-face communication. CSCL system is made for many learners from every corners of the world to use at the same workstation or across networked machines.

It requires teachers and students to adopt an educational philosophy or a technology medium that focuses on “knowledge building” as the main learning activity (Simons, 2004) which can support communicating ideas and information, accessing information and documents, asking, sharing and giving opinions on problem-solving activities. The research of CSCL covers the learners’ social, psychological, organizational, and also their learning effects. Theories related to the CSCL:

- Vygotsky’s Sociocultural Theory – Human intelligence comes from society or culture, and individual cognitive gain through social interaction than intrapersonal (internalization). His idea of ZPD is which peer interaction in which scaffolding and modeling are important ways to develop individual learning and thinking skills as well as support intentional learning that can be successfully employed in the study of CSCL. Learning takes place when peers engage in an interaction with one another. This ZPD can consist of people i.e. students and teachers, and also learning materials i.e. books and computers
- Constructivism Theory – Learning emphasizes on meaning-making through active participation in the real life worlds which involves the aspects of social, culture, history, and political situated context. To support this, it is important to carry out situated collaborative activities by participating in dialogs of experiences, making decisions, solving problems and having discourses which involve authentic and challenging projects. Its goal is to create learners to be responsible for their own learning in the real world.
- Problem-Based Learning/Anchored Instruction - This students-centered way of learning begins with a problem to be solved rather than mastering content. For example, students create a problem and solve it among themselves by discussion/interaction.
- Distributed Cognition- The interaction among individuals, their environment, and their cultural artifacts is vital. The minds of the individuals should be a reciprocal process i.e. getting learners to be used to the tools which lead to the changes of the joint performances and products at the end of the task. The improved competencies gained then can distribute among and stay in individuals, thus having improvements in the aspect of cognition. Whoever plays the leading role in influencing this distributed cognition is situated bounded.
- Cognitive Flexibility Theory - Spiro’s Theory (1988) and criss-crosses landscape theory approaches present how general knowledge is transferred in ill-structured domains. They suggest an over-lapping of well-and-ill-structuredness in the early stages, to familiar learners with grounded knowledge yet avoid establishing rigid presentation instruction or course.
- Cognitive Apprenticeship – Students develop cognitive strategies when teachers provide them with a framework as guides using instruction process. Wilson & Cole (1994) describe the core characteristics of cognitive apprenticeship model: heuristic content, situated learning, modeling, coaching, articulation, reflection, exploration, and order in increasing complexity. It also allows peers to learn through their interaction, and to share their experiences with the group.

- **Situated Cognition**—This cognition is viewed as situation-bound and distributed rather than decontextualized tools and product of minds. Thinking is both physically and socially situated. Interactions can take place during problem solving, provided that problems are not artificial but reflect the real world. This new way of learning emphasizes a system of learning a skill, coaching, collaboration, multiple practice, articulation of learning skills, stories and technology.
- **Self-Regulated Learning - Metacognition**-A self-regulated learner knows if she/he knows a fact or when she/he does not.

Acquisition is a systemic and controllable process where the mind controls input/information in a systematic way thus greater responsibility for achievement is accepted. The learner is the initiator of the learning process, so she/he is responsible for her/his own cognition. This theory has played a part in behavioral, cognitive, awareness, social cognition, and constructivism theory. In behavioral theory, regulation is achieved through external reinforcement to encourage positiveness. In cognition theory, self-regulation is knowing about and regulating cognition, as in practicing what one understands. Social cognition theory is a combination of self-observation, self judgment, and self reaction.

METHODOLOGY

Sample

10 students from a secondary school in Malaysia were selected to work collaboratively via e-mail with their peers (also 10 students) from a high school in USA. The following are the profiles of the students involved in this study:

Profile of students from Malaysia	
Age of students	6 students-17 years old, 1 student-16 years old, 1 student-15 years old, 2 students -14 years old (10 altogether)
Level of proficiency	average
Race of students	6 Malays, 3 Indians , 1 Punjabi
Gender of students	7 males, 3 females
Class level	Secondary school (forms 2 to 5)

Profile of students from USA	
Age of students	All are 17 years old.
Level of proficiency	high
Race of students	1 Asian, 1 Black, 1 Pakistani, others Anglo Hispanic (10 altogether)
Gender of students	7 males, 3 females
Class level	12 th grade-honors'

INSTRUMENTS

The instrument used for collection of data is interview. After the Malaysian students have completed the projects with the support provided by the peers from the USA they were interviewed to elicit their perceptions regarding the computer supported collaborative learning.

PROCEDURE

The first stage of conducting the research is the briefing of the 10 Malaysian students. The CSCL concept was first introduced to them. Profiles of the students from USA as well as the Malaysian were collected by the researcher. This included name, age, knowledge in computers, family/school life, their class and also social background of all students involved. Then, an explanation of the task took place, whereby the 10 Malaysian students were told that they will have to write on 10 different topics. This was to ensure that these students did not copy from each other when they were in the midst of the project. The Malaysian teacher also briefed her students on what is to be done and how to go about it this project in communication via e-mail. She told them what is to be expected out of this project. The students who did not have an e-mail created one for themselves.

After the briefing, they (the Malaysian students) were given their topics which differ from one another, and also the email addresses of their buddies in the USA. Students from the USA were briefed as well by their teacher while the teacher had already given the green light to the researcher for the students to begin communication via email. Then, they began to communicate with their buddies via email, talking about school preparations (mentally and emotionally) i.e. feelings and plans for their future, activities in school, sports, courses taken and any opinion/likes/dislikes to share so that students will establish a personal relationship.

This is when the Malaysian students began collecting information about their topics. They first asked for information related to the topics assigned for them by the teacher. Information may contribute to the content of the essays they produce later.

At the same time, the students from the USA were also briefed on the project and what is expected from this collaboration that is to provide information based on topics. In the next stage, one of the researchers communicated with the teacher from the USA to ascertain that her students replied and communicated to the samples. All students worked on this online project for a semester because it was ample enough time to work on the writing project.

Students printed the feedbacks from their buddies and kept them in their files as evidences. They were told that pictures were allowed. These evidences are to show that they wrote their essays using the information given by their buddies for their project. This included their first draft as well as their final. Their buddies' (from USA) feedback about USA culture and lifestyle were the contents of their (Malaysian students') project. Apart from that, the Malaysian students also wrote in their essays about their own cultures in comparison.

This was to develop critical thinking skills among the samples and the readers of the projects, besides contrasting the lifestyles of Malaysia and the USA where they compared and showed contrast of the two different cultures and knowledge was attained. Of and on, the teacher from the USA also emailed the Malaysian teacher to report on how she was coping with her students' collaboration activities. This was in line with one of the collaborative learning principles—to regulate and monitor the interactions. The print(s) of the teachers' communications with the teacher from the USA were also kept as evidence that there was collaboration on both sides.

The topics were chosen by the researcher because they can open up discussions on different cultures and backgrounds for students to write a comparison between Malaysia and USA.

All topics for the 10 students which had elements of cultural awareness and they discuss with their buddies are shown below:

	TOPICS
1	Historical Places in the USA and Malaysia
2	Visiting Places in the USA and Malaysia
3	Welcoming the New Year in the USA and Malaysia
4	A Traditional Wedding Ceremony in the USA and Malaysia
5	Festivals in the USA and Malaysia
6	National Day Celebration in the USA and Malaysia
7	Christmas in the USA and Malaysia
8	A Great Holiday in the USA and Malaysia
9	Examination Preparation in the USA and Malaysia
10	Religions in the USA and Malaysia.

ESL STUDENTS' PERCEPTIONS ON CSCL

This section will discuss the students' perceptions of using CSCL as a new learning approach in ESL writing. The data collected from the interview was analysed and reported.

First we will discuss the feelings of the students and their perceptions in completing their projects collaboratively.

They were also asked about the strengths and weaknesses of the approach.

The tables below summarised the findings:

Table: 1
Coding of interview transcripts based on
the feelings of the students who embarked on the project

Cod	Component	Students who commented on the component in their transcript
B1	Happy	Haziq, Faiz, Iqram, Neesha, Shahira, David
B2	Lucky	Faiz, Shahira
B3	Honoured	Shahira
B4	Delighted	Yassir
B5	New experience	Jeshua, Sedhiqin, Neesha, David, Rishmit
B6	excited	David

Table: 2
Coding of interview transcripts based on
the perceptions of the students about the Project

Code	Component	Students who commented on the component in their transcript
E1	New experience	Haziq
E2	Great	Jeshua, Iqram, David
E3	Good	Sedhiqin
E4	Unique	Yasir
E5	Opportunity to improve English	Faiz, Shahira
E6	Interesting	Neesha, Rishmit
E7	Efficient	David

Table: 3
Coding of interview transcripts based on
the strengths of the project (Students' views)

Code	Component	Students who commented on the component in their transcript
F1	Communication with people from all over the world	Haziq, Iqram, David
F2	Learning new things	Jeshua, Neesha
F3	Way to get information	Sedhiqin, Yassir
F4	Enhance knowledge	Sedhiqin
F5	New way of learning	Faiz, Shahira
F6	Improvement	Faiz, Shahira
F7	Awareness	Rishmit

Table: 4
Coding of interview transcripts based on
the weaknesses of the project (Students' views)

Code	Component	Students who commented on the component in their transcript
G1	Lack of time	Haziq
G2	Lack of replies	Haziq, Jeshua, Sedhiqin, Yassir, Faiz, Iqram, Neesha, Shahira, David, Rishmit

According to codes B, E,F and G, the students perceive this project as a positive task to take on. To begin with, let's look at code B first. All students commented positively about taking part in this project when they were asked about their feelings about the project. As seen above, most students were happy about this project. They used the words 'delighted' and 'happy' when asked about their feelings. 3 of them who did not use these words felt that this was a new way of making friends. The table below shows some excerpts that illustrates on the students' feelings about this project:

Table: 5
Students' interview responses excerpts based on their feelings

Code	Component	Transcript excerpt
—		B1 happy (and honoured) Shahira: I feel honoured and happy.....
		B2 lucky Shahira: ...and I feel I am such a lucky person to do this project.
		B5 new David: ...great chance for me to gain a new experience
		B6 excited (and happy) David: I felt very happy and excited about this project...

This implies that interaction and communication via email could be new, thus making the students interested and curious about learning so that they approached the project seriously. On the whole, all their responses were very positive. They were generally happy about their new acquaintances. It is noticed here that more than a word of feeling was used by the students (Shahira, Faiz, Neesha, David). In addition to that, the interview also elicited the students' opinion about the project after they completed the projects. Some students said that it was interesting as in E6, and the others said that this was an opportunity to improve their English in a different way showed in E5. The following table explains further some of the students excerpts in the interview when they were asked question #2.

Table: 6
Students' interview responses excerpts based on their perceptions

Code	Component	Transcript Excerpts
—		E4 unique Yassir: I think this project is really unique because it involves online and technologies and for me to communicate with foreign students abroad in America.
		E7 efficient David: umm... I think this online assignment is really a great way for teenagers from different countries to communicate. Since mostly everyone these days has e-mail, it's

really fast and efficient way to communicate.

E3 good

Sedhiqin: mmm...I felt good being given this chance to do this project.

It can be seen here that all students felt that this project has served them purposefully. Words that they used when responding were 'good', 'great', 'unique', 'improve English' and 'new knowledge'.

The students did believe that this kind of project is of advantage to them, which may be more a result of communication and interaction with a foreigner or someone who knows better than them.

They were generally happy about the way they got the information needed for their essays and that is using technology via e-mail.

Table: 7
Students' interview responses excerpts based on strengths and weaknesses

Code	component	Transcript excerpts
—		F2 learning new things Jeshua: I learn new things like the culture about US especially Christmas celebration there. It gave me some awareness of the religion as well. It is also a new way of learning to write.
		F4 enhance knowledge Sedhiqin: umm...it is a truly a way to get information about the US besides doing it the common way like going to the library or finding it from the internet. Also, enhance[s] my knowledge about historical places there.
		F7 awareness Rishmit: I learnt new things such as culture awareness, religion, et cetera...

As seen in codes F and G in Table 7 and 8, there were strengths and weaknesses of this new way of learning, according to the students.

Responses from each student explained the perceptions about the projects' strengths and weaknesses. The table below shows some excerpts that illustrate the strengths first and then the weaknesses of working collaboratively online for the projects.

The students reported both strengths and weaknesses as this is a new way of learning for them. Note that there were some students who gave the same responses as the others in either the weaknesses or strengths. In code G, the weaknesses of this project was reported by Haziq (G1) were "the lack of time and replies to complete this project in time". He felt that the lacking of replies is taking most of his time. He was more concerned with completing the project in time. The others commented on the lack of replies that made them frustrated.

These (lack of time and replies) were the only two aspects that the students responded when they were asked about the weaknesses of the online collaboration. However, we can see that there are more strengths than weaknesses reported by the student.

This implies that although there were problems faced by the students in the online interactions, these problems did not hinder them from completing the projects.

This could be because this project was somewhat a new way of learning and gaining information and input, as stated by the students in the interview. The results suggest that in all new ways of learning, there are pros and cons a teacher and her/his students must encounter. Besides that, students have mastered new approaches of learning at the end of the project when they interacted with others.

The last few of the questions in the interview were useful for us to examine closely, as they relate to preferences in learning English skills using the technology and thus can be compared among each other to judge the degree of students' attitudes towards learning. All of the students prefer getting information using this innovative way (getting information from their buddies from another classroom out of the country) when it comes to gathering data for any assignment in the future rather than using traditional ways.

CONCLUSION

This study has unraveled many implications to many parties concern. Firstly, to the students, it is a new way of self-study outside the walls of a classroom. Getting information from peers who have better knowledge is a good way for learning to take place (Vygotsky's theory of ZPD). They can improve literacy with writing suggested this study and cultivate knowledge and cultural understanding besides increase motivation through self-directed, CL and access to technology.

As for teachers, they can engage students with fun and real-world learning situation, participate in e-pals projects in many subjects, foster cultural awareness, focus on teaching with technology and also track students' progress apart from posting homework/activities for students.

For parents of students, they can have dialogs with school staff, experience multilingual communication, have confidence that students' tasks are monitored and also understand the online environment.

Present day writing classrooms have no boundaries now. CSCL offers global communications where teachers/students are discovering the magic of collaborating with other schools/classes. From around the world teaching and learning are no more within the four walls of the classroom.

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