Can Collaborative Learning Maximize the Effectiveness of Web Quest Used in Learning Educational Psychology at Al Majmaa University?

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Abstract:

The purpose of this study is to investigate whether collaborative learning can maximize the effectiveness of Web Quest used as a medium in teaching and learning in Educational Psychology. The present study also examined the perception of students of Web Quest and collaborative learning method. Students were selected from the Faculty of Education at Al Majmaa University in Zulfi, Saudi Arabia. Quantitative and qualitative approaches were used in this study. The results showed that Web Quest used in teaching and learning in Educational Psychology had a positive impact on students' learning, participants were required to complete a self-report questionnaire about the effectiveness with or without Web Quest.

Nevertheless, students were interested in the Web Quests as a creative teaching tool. The use of Web Quest strategy enables the creation of interactive and fun learning among students. Therefore, the application of Web quest in lessons is suitable and should be applied by all teachers in their learning activities to increase students' interest and performance in educational psychology.

Key Words: Web Quests, educational psychology, learning, collaborative critical thinking skills, social skills, motivation, strategy.

Introduction

The Web Quest assignment adheres to the philosophy of differentiated instruction in that it gives students, particularly gifted students, and an opportunity to make choices based on ability, interests, and individual motivation to learn (Schweizer, 2007).

Although Web Quest has been used as an inquiry-based learning tool and a creative teaching strategy in primary and

secondary schools in Saudi Arabia, it has rarely been used in the general education offered by universities. Every year, new technologies and applications are introduced into classrooms. Web Quest, however, is a technology application that has been around for over ten years and is used in classrooms around the world. Web Quest is an internet-based technology application in which groups of students follow a specific set of steps toward the completion of a final project on a specific or multi- disciplinary subject (Siko, 2008).

Torres (2007) described Web Quest as task-based and content-based learning. It is a lesson prepared by teachers in the form of a web page with pre-selected links. It gives students the opportunity to be exposed to authentic materials that improve their language writing. Moreover, it requires collaboration and cooperation among groups, thereby helping students to learn from each other and to develop social skills and critical thinking. However, few studies have investigated its effects on improving writing skills. Web Quest provides the opportunity to integrate technology into teaching and makes students focus on how to use and find quality information on the Internet. Furthermore, it helps students develop autonomy as they do their work, share opinions, discuss, and solve problems (Barros & Carvalho, 2007).

Morrison pointed out that web-based inquiry would be very difficult due to the change of rapid life and the existence of ill- organized information on the World Wide Web (Morrison, et al, 1998). Teachers are advisers that support and scaffold students by bringing computer assisted teaching into the subject learning (Hill et al., 2001).

Web Quest is an inquiry-based teaching tool, in which students of all ages and levels participate in an authentic task that use pre-designed, pre-defined internet resources, though other print resources can also be used. Learners will focus on gathering, summarizing, synthesizing, and evaluating the information within clearly defined parameters in order to accomplish an authentic task set by the instructor. Web Quest takes a problem-solving approach and exhibits a clear structure

that guides the learning processes and interactions (Dodge, 2001), and can be used for different subject areas across age levels, from young children to adult learners. Research has documented that Web Quest is effective in promoting student engagement, motivation, connecting to authentic contexts, critical thinking, higher order thinking, literacy skills, and Information and Communication Technology (ICT) integration (Yang et.al, 2011).

In order to improve the effectiveness of teaching diversity of teaching aids should be utilized by teachers in all subjects including Educational Psychology. The use of ICT is not only limited to practical subjects but had to be practiced in others subject like Educational Psychology. Therefore, the use of Web Quest applications tested in this study to look at its effectiveness in improving students' achievement. Educational Psychology is a subject that must be taken by each students in the faculty of education. In this subject, there are several components that must be learned by students such as the concept of learning and its conditions, motivation, maturity, practice, learning theories and their application. The students. Most students don't like Educational Psychology, therefore to attract these students to study, a comprehensive approach needs to be done by instructors in their teaching. Therefore, teaching methods need to be constantly changing to enhance student creativity, as well as to encourage students' involovement in classes. The use of ICT, such as websites, interactive multimedia, internet, web quest, course ware, will be able to attract students' interest to study. According to Hasimah (1994) over 90% of students agreed the use of computer increased their motivation to learn and also improve teaching and learning. In addition they felt ICI contributed to the efficient in learning and it also can be an effective reference material for them to study. Hence the effectiveness should be tested learning and teaching structure in Educational Psychology.

Literature review

Web Quest

While the integration of technology in education is highly valued, some researchers also caution, "technology alone does not guarantee solutions to educational problems" (Hassanien, 2006, p.42). In response to this caution, this research project proposes the use of Web Quest. Web Quest demonstrated a project-based learning that helps students to complete authentic projects integrating technology in their learning (Garry, 2001). Developed by Dodge (1995), Web Quest is an inquiry-based teaching tool, in which students of all ages and levels participate in an authentic task that use pre-designed, pre-defined internet resources, though other print resources can also be used. Learners will focus on gathering, summarizing, synthesizing, and evaluating the information within clearly defined parameters in order to accomplish an authentic task set by the instructor. Web Quest takes a problem-solving approach and exhibits a clear structure that guides the learning processes and interactions (Dodge, 2001), and can be used for different subject areas across age levels, from young children to adult learners (Ezell, Klein, Hines, & Hall, 2003). Research has documented that Web Quest is effective in promoting student engagement, motivation, connecting to authentic contexts, critical thinking, higher order thinking, literacy skills, and Information and Communication Technology (ICT) integration (Abbitt & Ophus, 2008; Ikpeze & Boyd, 2007; Kanuka, Rourke, & Laflamme, 2007).

Web Quest is an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet (Dodge, 1995). Thus, collaborative learning is compatible with the combination of Web Quest application which is inquiry activity that requires students to obtain information from Internet. Therefore, the study will identify the effectiveness of the use of Web Quest in collaborative learning on Educational Psychology. Teaching linearly only enables students to understand and memorize the information to

be answered in the examination solely but it will be difficult for them to remember them after that.

Web Quest is a scaffold learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate student's investigation of a central, open question. It involves development of individual expertise and participation in a final group process that attempts to transform newly acquired information into a more sophisticated understanding. Web Quest does this in a way that inspires students to see richer thematic relationships, facilitates a contribution to the real world of learning and reflects on their own metacognitive process (Luzon, 2007).

Web Quest was first introduced as an instructional approach in 1995. The format consists of the following six elements:

1. Introduction :(Introduces the topic of the inquiry).
2. Task: (Provides a description of the task to be accomplished).
3. Process (Provides a description of the steps that need to be taken to accomplish the task).
4. Resources: (Web Quests related to the topic described in step one where students can locate the necessary information to complete the task).
5. Guidance: (Some instructors include assessment rubrics to provide students with clear assessment guidelines that will be used by the teacher to evaluate the project).
6. Conclusion: (Provides closure, a list of references, and summarizes what has been accomplished) (Moeller et al., 2006).

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Web Quest and learning

Motivation is an important psychological element in learning; it plays an important role in students' ability to accomplish long-term goals (Guilloteaux & Dörnyei, 2008). Web Quest consist of motivating and authentic tasks (Zheng, Perez, Williamson, & Flygare, 2007) that require students to concentrate (Dudeney, 2003). Students in all grades enjoy learning with technology (Abbit & Ophus, 2008). Moreover, Web Quest is stimulating and useful; students remember lessons far better via Web Quest than through traditional ways of learning (Hassanien, 2006). The teacher's role is to guide students in how to use Web Quest.

According to Torres (2007), using Web Quest in learning has many advantages. Initially, it promotes the effective use of time; students use the links given by the teacher and search for information in a structured, efficient manner. It also creates motivation between students and supports higher-order thinking. Students are required to read, think, analyze, synthesize, and evaluate. The evaluation of students is accomplished through rubrics; the teacher explains what students are supposed to do in the form of a checklist (Strickland, 2005). Chang, Chen, and Hsu (2010), in demonstrating the impact of different teaching strategies on the learning performance of environmental education, found that Web Quest fostered students' critical thinking skills by encouraging different learning tasks and expression of opinions. In a study identifying the underlying constructs of Web Quest as perceived by teachers, Zheng, Perez, Williamson, and Flygare (2007) found three constructs to be critical to Web Quest: constructivist problem solving, social interaction, and scaffold learning. This finding suggests that instead of focusing on critical thinking skills, emphasis could be placed on constructivist learning that incorporates critical thinking and knowledge application (Zheng et al., 2007).

Segers and Verhoeven (2009) suggest Web Quest can be seen as a method that helps organize the learning process in line

with the theory of dialectic constructivism. In their investigation of the effects of Web Quests on learning in elementary school classrooms in the Netherlands, Segers and Verhoeven (2009) found the effect size of learning from Web Quest was moderate to high, as it offers a structured method by which students can engage with the Internet. This structure particularly benefited boys who learned more using Web Quest as opposed to a free-search environment.

Constructivism Theory in Collaborative Learning:

According to Johnson et al., (1981) collaborative learning is a form of group which needs students to work together to maximize learning with each other. Collaborative learning is learning based on student centered learning and it is consistent with the constructivism principle. Constructivist principles are consistent with student centered learning approach which allows students to correlate learning with experience and accept it from different perspectives. Constructivist learning assigns to a set of learning theories as an epistemological alternative to objectivist theories of knowledge. The constructivist approach is concerned with support for the construction of internal knowledge structures through active learning (Swan, 2005).

Collaborative learning encourages students to gain knowledge in groups and increases participation in group discussion. Each member of the group will discuss and assist team members in problem solving. For example, team members will assist those who are less skilled reading the text in psychology. Teacher's role in traditional teaching is different since the teacher gives information to students (Chafe, 1998). In other words, it is teacher centered that can be seen more as chalk-and –talk style. Baghcheghi (2011) found that most students in that class are silent, inactive and just listen to what was taught by lecturer. The traditional method encourages students to work individually and compete against one another and normally is concerned with the improvement of their own grade. (Manlunas, 2011). On the other hand, collaborative learning requires students to concentrate and pay attention to

receive information from other friends and require communication among all members

Collaboration has been defined by (Leite et al., 2006) as "... any activity that in which two or more people work together to create meaning, explore a topic, or improve skills". March (2003) stated that learning always occurs in social situations and that learning is both a social and a personal phenomenon. The sharing of multiple perspectives tends to increase the knowledge learned and the satisfaction derived from the process. There is evidence from traditional classroom environments, non–traditional face to face environments, and from on–line environments that collaboration can enhance learning.

Training in collaborative learning processes can lead to:

a. High achievement – social & personal development: Collaborative Learning promotes high achievement as well as personal and social development. Lee (2001) reached this conclusion after surveying more than 1,000 research studies investigating the relative effects of collaboration, competition and individualistic interdependence.
b. Motivation: Collaborative learning increases the understanding of content and provides greater motivation to stay on task.
c. Independent learners – team learners: Collaborative learning helps trainees actively construct content, take responsibility for their work and resolve group conflicts. It is especially important in the context of developing team work skills.
d. Critical thinking: Collaborative learning enhances critical thinking as it allows trainees to discuss, clarify and evaluate ideas. Collaborative learning fosters the development of critical thinking through discussion, clarification of ideas, and evaluation of others' ideas. According to Johnson and Johnson (1988), there is persuasive evidence that cooperative teams achieve

higher levels of thought and retain information longer than those who work quietly as individuals.

e. Higher order thinking: Collaborative groups are characterized by shared leadership, shared responsibility for each other, individual accountability, positive interdependence, trainer observation and intervention, direct teaching of social skills and groups monitoring their own effectiveness. If the purpose of instruction is to enhance critical– thinking and problem–solving skills, then collaborative learning is beneficial.
f. Social and cognitive skills: Collaborative learning enhances both social and cognitive skills.

Many studies have found that using Web Quest enhanced vital cooperation and collaboration among students, which is vital for student development (Gorghiu, Gorghiu, González, & García de la Santa, 2006; Lara & Repáraz, 2007; Murray & McPherson, 2009; & Torres, 2007). Murray and McPherson (2009) mentioned that Web Quest support group work. Working collaboratively, students improve speaking skills through verbal interaction with peers. When students work in groups, they discuss assignments and this leads to vocabulary exchange. According to Torres (2007), using Web Quests has the ability to promote collaboration and cooperation among students while using the target language, and this interaction in turn fosters responsible and independent learning and achieves social skills learning.

Pupils displayed greater enthusiasm playing specific roles and relaying information to group partners in the Web Quest team. Working in groups is beneficial; it gives students the opportunity to teach and to correct each other's mistakes. It makes them feel mature and responsible as a whole in addition to building social skills (Strickland, 2005).

Web Quest as a teaching creative tool

Web Quest is an inquiry-oriented activity in which some or all of the information that learners interact with comes from

resources on the Internet (Dodge, 1995). Web Quests can also help students acquire electronic communication skills by providing them with practice in using communication tools effectively. For instance, students can be asked to take part in forums related to the Web Quest topic and use the discussion in the forum as a source of information. The sub-tasks and roles proposed in the Web Quest could require students to communicate with each other or to ask discipline experts through e-mail in order to complete the task. Web Quest could incorporate tools for online debating when the kind of activity proposed requires or allows for this element (Dodge, 2001).

Statement of the problem

A search of several databases resulted in few empirical studies that look at the educational benefits of using Web Quests with students in universities. Milson (2002) stated that the literature consists of "anecdotal accounts of success rather than independent research on this instructional technique" . Several articles investigated the link between using Web Quests and fostering critical thinking. All of these articles support the notion that Web Quests are excellent tools for fostering critical thinking skills, but what about content? The focus on high-stakes testing requires teachers to be more than a little concerned about the content students learn.

Studies on the efficacy of Web Quest have shown that there is a significant improvement in students' learning behavior in general. However, few studies have examined its effect on the **perception** of students towards Web Quest and a collaborative learning method, and the effectiveness of web Quest used as a creative teaching tool for learning effectiveness.

Research Questions

Can collaborative learning maximize the effectiveness of Web Quest used in learning?

Method

Research design

This research adopted a quasi-experimental design in investigating the effectiveness of the use of Web Quest in collaborative learning on Educational Psychology. Two classes who have a moderate students' achievement have been selected as treatment and control group. For the treatment group, the class lesson conducted with the used of Web Quest and has been taught through collaborative learning method. While, for control group the learning conducted with the use of Web Quest through conventional teaching and learning method. Pre- test and post test have been conducted for both groups.

Sample of study

The sample of the study consisted of colleges 'students from Al Majmaa University, from the faculty of education in Zulfi, in Saudi Arabia. A total of 65 students participated in the study. The sample identified by using Cluster Random Sampling. The treatment group consists of 33 female participants, and the control group consists of 32 of female participants with same academic achievement.

Research instrument:

To determine the effectiveness of the Web Quest used as a medium in teaching and learning in Educational Psychology the researcher used the instruments below:

1. Pre test has been carrying out for both groups to analyze the students' achievement. There were 30 objective questions core syllabus topic in the pre test then the same questions have been answered by students in the post test after class finished.the time was allocated was 45 minutes. While, the post test conducted for both groups. The purpose of the post test to identify the differences of students' achievement after receiving treatment class.
2. The quantitative and qualitative approaches were used in the study to investigate the effectiveness of using Web Quest as a medium of teaching and collaborative learning

in Educational Psychology. The questionnaire used was adaptation from the study of Dodge (2001).Each item in questionnaire was based on likert scale.

3. The total of the treatment group participants participated in the interview in order to identify the perception towards collaborative learning and Web Quest use.

Results:

Quantitative findings

The results will be displayed according to the hypothesis of the research

Table 1 reports the mean, median, mode and standard deviation for both pre- and post-test scores. The data found the maximum and minimum values of pre-test were 20.00 and 6.00. For post-test the minimum value was 22.0 and maximum value was 7.00. The mean scores for both pre- and post-test were 13.28 and 15.39. The mean differences between pre- and post-test were 2.11 which showed that the Web Quest used gave positive impact on students' achievement in learning Educational Psychology.

Table 1: Pre and Post Test for Web Quest used in Teaching and Learning Educational Psychology

	Pretest	post test
Mean	**13.279**	**15.390**
Median	**14.000**	**16.000**
Mode	**14.000**	**17.000**
Standard Deviation	**2.760**	**3.480**
Minimum	**6.00**	**7.000**
Maximum	**20.00**	**22.00**

Table 2: The comparison between used of Web Quest in teaching and collaborative learning method with Web Quest used in teaching and learning through conventional learning method

	Levene's Test for equality of variances		T-test for equality of means				
Post-test	*Equal*	*F*	*sig*	*t*	*df*	*Sig (2-tailed)*	*Mean difference*
Variance Assumed	.145	.701	.626	61		.534	.55242
Equal Variance Not assumed				.624	59.233	.535	.55242

As indicated in table 2, the mean difference score was 0.5520, t- value was 0.621 and p value was 0.530.The p value was too high to accept as a significant result. Therefore, there was no significant difference between the use of Web Quest in Educational Psychology through collaborative learning and teaching using Web Quest through conventional teaching and learning. The average scores reported that collaborative learning did not influence the increment of student learning achievement.

Can collaborative learning maximize the effectiveness of Web Quests used in learning? To answer this question, the researcher used Evaluation on the Web Quest design

TABLE III

No statement	ab (N= 65)	b	Tp	tb	atb	m	sp	Min&SP
C1 Graphics used were suitable and attractive	52.1 (33)	41.0 (26)	1.3 (2)	2.9 (2)	1.3 (2)	1.2537	0.51398	
C2Pictures used are suitable and attractive	54.1 (36)	41.0 (26)	1.3 (3)			1.444	0.53290	
C3 Interface is user friendly	47.3 (30)	41.0 (26)	11.0 (9)			1.6346	0.677	
C4 Colours and icon are appropriate and attractive	39.4 (25)	44.1 (28)	15.7 (12)			1.7617	0.71195	
C5 Language used were appropriate and easy to understand	44.1 (28)	42.7 (27)	11.1 (10)		1.3 (2)	1.473	0.69227	
C6 Increase my motivation to study	63.2 (40)	25.1 (16)	11.0 (9)			1.4759	0.69227	
C7 Easy for me to receive knowledge	60.0 (38)	36.2 (23)	2.9 (4)			1.4283	0.55976	
C8 Give a chance to me to revise base on my own abilities	34.6 (22)	44.1 (28)	18.7 (12)	1.3 (3)		1.8727	0.77232	
C9 Attract me to get extra information through link provided in web quest	37.9 (25)	48.9 (31)	0.8 (7)		1.3 (2)	1.7775	0.77132	
C10 Easy for me to make reference	41.0 (26)	39.4 (25)	17.2 (11)	1.3 (3)		1.7934	0.78613	
C11 Attract to study and not bored	45.7 (29)	37.8 (24)	12.4 (8)	1.3 (2)	1.3 (2)	1.7457	0.86073	
C12 Overall web quest is suitable and interesting in teaching and for learning Educational Psychology	80.7 (51)	14.0 (9)	2.9 (2)	1.3 (3)		1.2538	0.59480	

Table 3 presents the students' responses about the web quest layout. According to Table 3, the higher percentage of C1 (93.5%) and C2 (98.00%) showed that most students agreed the graphics and pictures used in Web Quest were suitable and attractive. Otherwise, both results showed only 1.5% of them not sure with the suitability of the graphics and pictures used. While, both items mean score were 1.6030 and 1.4442 which indicate that students agreed that pictures and graphic included in the Web Quest were suitable and attractive.

The percentage for both C3 and C4 ranged between 87.9% and 83.1%. These indicated that almost all students complied that the interface created was user friendly as well as icon and the colour used were compatible.

The mean scores ranged between 1.6346 and 1.7616 for item C3 and C4 which indicates students' positive view. Concerning language, 87.3% students agreed that the language used in Web Quest was appropriate and easy to understand. However, there are some students (1.6%) who do not agree and felt that the language used is difficult to understand. The result in the item C6 showed that 88.9% of the students agreed that Web Quest motivateed them to study. 11.1 % of them stated that they were not sure whether the use of Web Quest increased their motivation towards study or otherwise.

Students' responses on item C7 reported that the majority of students agreed that Web Quest used enabled them to receive instruction and information easily compared to only 4.2% of students who were not sure of receiving information by Web Quest used in teaching. While, more than half of the students (78.4%) stated that Web Quest gave them the opportunity to revise Educational Psychology lessons according to their own ability. However, 1.6 % of the students did not agree with the statement.

Responses on items C9 and C10 showed that the majority of students, 87.3% and 81% respectively, indicated that Web Quest used attracted them to obtain extra information about the lesson

through links provided. Yet, 1.6% of students claimed that they were not interested to explore extra information by using Web Quest links and felt that it was difficult to make reference using that application. However, the mean scores ranged between 1.777% and 1.793% indicating that most students agreed on statement C9 and C10.

The result in C11 explained that 83.1% students agreed that Web Quest was attractive and arrest attention to study and was not boring for them. Just a few of them reported that they were not sure and claimed that Web Quest was boring and unattractive. The last item, C12 showed that 94.3% of the students agreed that the use of Web Quest was compatible in learning and teaching Educational Psychology. 1.6%of the students found that the Web Quest was not compatible at all. The mean scores range between 1.2537 and 1.8730 indicating that the positive results of using Web Quest for teaching and learning Educational Psychology.

Qualitative findings

Four perceptions of students towards teaching and learning by using Web Quest on educational psychology are summarized in table IV. Table V summarized the interview results which were aimed to examine students' perception towards collaborative learning in Educational Psychology. According to the results, there were two difference perceptions on collaborative learning that has been identified on the negative and positive aspect. The results have been described in table V.

TABLE IV. PERCEPTION STUDENTS TOWARDS WEBQUEST USED IN TEACHING AND LEARNING OF EDUCATIONAL PSYCHOLOGY.

Web Quest help avoid boredom in class.
"I am satisfied when a teacher used Web Quest in teaching and learning Educational Psychology. It made me easy to understand and I do not feel sleepy."
"It is great! I don't feel boring when I'm studying"
"The things that attracted me in Web Quest are various colorful pictures used during the lesson was eliminating boredom."

"Web Quest help me to understand the lesson and it is good." "It is fun, very attractive".
Web Quest increases students' understanding "Yes. I agree. Web Quest is applicable and helps me to understand the subject such as learning theories which can be downloaded in YouTube." "I agree. It is made me easy to learn because Web Quest helps me to understand more and get more information." "I agree because through Web Quest I can see and listen clearly. I can easily determine the type of learning theories with assisting of attractive pictures in Web Quest." "I strongly agree. Web Quest makes me learning easy. This is because I can obtain new information."
Web quest motivates students to study "I feel very happy and excited when instructor was using Web Quest at the first time in Educational Psychology class." "I feel very happy and feel more interested to learn by using Web Quest "It is fun when there was video during study in class."

TABLE V. STUDENTS' PERCEPTION of COLLLABORATIVE LEARNING

Perceptions	**SUBJECTS**	
	POSITIVE	**NEGATIVE**
It makes The lesson more fun	**"It is fun when learning in group." " It is more enjoyable when learning in group" "I agree. Learning in group attracts my attention to study. This is because Web Quest application helping me to understand the topic."**	
Easy to understand and share information	**"... This is because Web Quest in collaborative learning activity helping me to understand the lecture." "..Learning in group attracts me to study. I can share opinion with each other." "Learning in group is suitable to practice in class**	

	in order to help me in problem solving activities." **"It is suitable to implement learning in group in Educational Psychology because this subject required us to generate ideas."** **It is compatible to practice in group because we can share information.**	
collaboration	**"...some students who can't understand learning theories. We can assist the weak students."**	**"Learning in groups can lead to fights because of argument."** **"There are group members that are unfair and selective in terms of collaboration.** **Some of them like to give instruction. I am not interested to learn in group."** **"Participants didn't give collaborative , they did not want to discuss and just do the work themselves."** **"Leaning in group is not compatible to implement in Educational Psychology because most student can't pay attention on teaching. They like to make noise and chats."** **"Learning in group is too noisy and I can't concentrate what is taught by teacher."** **"Learning in a group is too crowded and noisty.the members in a group are chatting with each other.**
Differences in learning abilities		**"Learning in group is not fun because of the imbalance of group members that is make the weak students feel down. "I am not confident and ashamed to give opinion. That why I don't like learning in group."**

Discussion

The effectiveness of Web Quest used in teaching and collaborative on educational psychology towards students' achievement.

Results of the study indicate that using Web Quest in teaching enhanced the students achievement in Educational Psychology at the university level. This improvement may be attributed to the method employed in teaching and learning. This means that the use of the Web Quest in teaching and learning Educational Psychology has noticeably increased the students' achievement. This result supports Gas et al. (2006) which compared learning outcomes in conventional versus Web Quest-based instruction. Data indicated that there was an improvement in students learning outcomes using Web Quest. However, traditional better enhanced learning compared to Web Quest based-instruction. This is consistent with Strickland (2005) where students taught using the traditional method scored higher than the students taught using Web Quest. Results are also consistent with Wui and Rohaida (2007) who found that nutrient websites facilitate science learning in nutrition.

Most students agreed that the elements adapted in Web Quest such as graphics, pictures, animation, colours, icons and language used were appropriate and suitable to use in Educational Psychological. They commented that colours were attractive and the graphics used were suitable and interesting. Students described the web quest as *"through Web quest I can add more knowledge about learning theories with attractive graphic."* This finding is congruent with Wui et al. (2007) who found that the students and teachers were satisfied with the Nutriquest website that provided them with attractive and interesting interface in terms of it colours, pictures and graphics.

Using Web Quest to Facilitate Educational psychology Learning:

It was observed that the Web Quest used in learning activities facilitated students' learning of Educational Psychology. Qualitative and quantitative data collected clearly explained that Web Quest used in educational psychology increased students' motivation to study.

According to March (1998), Web Quests increase student motivation by encouraging students to exert more effort, to be more alert and ready to make connections to information provided. In the present study, students described the Web Quest as "I feel very happy and excited when teacher use Web Quest at the first time in Educational Psychology's class." and "I feel very happy and feel more interested to learn by using Web Quest." This result also is in line with Chuo (2007) who found that Web Quest increased students' motivation to complete the task and assisted them to solve nontrivial problems suggesting solutions constructed by their own.

Furthermore, the study indicated that Web Quest provides a lot of information which helps to improve students' understanding in psychological topics. The links provided in Web Quest facilitated students to find extra information besides increase understanding. The students commented on Web Quest as "*... make me easy to learn because Web Quest help me to understand more and get more information".* This finding agrees with Wui and Rohaida (2007) who found that links on Web Quest were useful in helping students to gain information, and easily make revision. In addition, Web Quest helped them to complete tasks, enhanced understanding and was a convenient website to visit.

In other hand, application used in Web Quest such as YouTube encourage students understanding. Through YouTube the topic like controlling the class, motivation, learning disabilities etc. can be visualized easily. As described by a student *"I was very impressed with you tube used in Web Quest which show me the instruction of controlling the class in the correct way."* Multimedia elements in the Web Quest enable to attract interest and students' attention in teaching which can influence students' achievement in learning. The effectiveness of multimedia used has been shown by previous studies. According to Puthikanon (2007), multimedia applications such as voice card, audio, graphic, animation, slide presentation, 3D presentation software have better impact on learning and teaching activities. Pursuant and Ismail (2012) stated that persons can remember up to 90% of what they read, hear, say, and do simultaneously. Therefore, to achieve that, multiple teaching pedagogies must be implemented by integrating the ICT tools in

teaching and learning especially in educational psychology which required practical learning for more comprehension.

Generate interest and prevent boredom

According to Small et al. (1996), stimulating interest and preventing boredom was an important goal for promoting new learning environment. The same study reported that the most effective way to generate interest was colorful instruction that incorporates a variety of attention. Thus, in agreement with the present study, Web Quest reduced boredom among students and enhanced students' interest to study Educational Psychology. Consistent with interview results, students described Web Quest as *"The things that attract me in Web Quest are various colorful pictures. Used during the lesson eliminating boredom*

As has been discussed before, the multimedia elements used during the lesson attracted students' attention and interest to study. Small et al. (1996) also concluded that instructional materials which are irrelevant to learning content and goals of the instruction may possibly promote boredom. They reported that Web Quest increases understanding and makes learning more enjoyable.

Does collaborative learning maximize the effectiveness of Web Quest used in teaching?

The main objective of the study was to examine whether collaborative learning can maximize the effectiveness of Web Quest used in learning Educational Psychology. The effectiveness was measured base on academic achievement. Unexpectedly, results showed that collaborative learning did not influence students' learning outcomes. The study compared the use of collaborative learning and conventional learning in teaching by using Web Quest. The results reported that there were no significant differences between both learning methods. It concluded that collaborative learning did not contribute to the effectiveness of Web Quest used in Educational Psychology. This is contrary to Wui and Rohaida (2007) who found that Web-Quest helps to facilitate collaborative learning. The researchers reported that students learned how to lead the group, be more

responsible as members in the group, help to understand the learning content, learned to cooperate with friends, and discuss and share information. The same study also revealed that students preferred working in groups (collaborative learning) in Web Quest instruction. Positive results were also reported in Lara and Repáraz (2005) who concluded that integration between collaborative learning and the use of Web Quest in classroom produced solid learning among students.

Although this study showed that collaborative learning did not show positive influence, yet, Web Quest used alone still shows improvement in students' learning outcomes.

Students' perception towards Collaborative learning:

It was found that collaborative learning did not promote or assist to the effectiveness of Web Quest used in teaching and learning on educational. Related to that result, students' attitudes towards collaborative learning have been investigated and it measured base on students' perception. The findings will be discussed from the positive and negative aspects of students' attitudes and as the results of this study were more likely to the negative perception. Similar study by Weinburgh (1995), who has been studying the correlation between attitudes and achievement, indicated that positive attitude toward collaborative learning contributed to the greater achievement. Therefore, it can be formulated that more negative attitudes was leading to the less achievement. The present study itself showed the negative attitudes appeared more than positive attitudes.

F. Fun and enhance understanding:

The students claimed that collaborative learning made the assignment or task more fun. It can be associated due to its ability to enhance students' understanding the subject and its characteristic which required them to working in group then encouraged enjoyable in class. Students believe that working in group made the task much easier, everyone can discuss and share information together in order to complete the task. Therefore, It can be summarized that collaborative learning was fun because its ability to increase students understanding

towards course. These findings were supported by Johnson et al, (1981), who found that learning together gave a greatest effect on students' achievement compared to other variables.

According to the Battistich et al (1993), good interaction among team members was important to determine the effectiveness of collaborative learning. Good interactions characteristics such as group members were friendly, willing to help one another, showed concern for one another welfare and work collaboratively. While, less group interaction contributed to the negative students' outcomes. Hence, in present study some students described the collaborative learning enables them to assist weak students in team. However, more negative responds has been reported resulting from lack of collaboration among team members. Negative attitudes were causes from arguing with group members, dominating or dictatorship, unfair and selective team members' attitude. Students also reported that they were not able to pay attention in study due to the lack of concentration among team members. It found that students like to talk each other in group and made noise. While, similar study by Gillies (2004) who reported that students in structure collaborative learning group were less likely try to dominate and control unstructured collaborative learning group. The same study also revealed that, this group was more likely to listen to each other, ask each other to expand on points they were making, share ideas, and help each other compared to unstructured groups. Related to the research by Battistich et al. (1993), that group can be considered to have a good interaction, work collaboratively and finally, will be contributed to the positive outcomes.

CONCLUSION

The study showed improvement in the performance of the students in Educational Psychology. The results showed that Web Quest helped and guided group members in studying Educational Psychology beside motivating students to learn and leading them to seek information. Comparison between traditional learning and collaborative learning showed no

significant differences in term of students' achievement. It did not enhance the effectiveness of Web Quest. The study showed that most students had good attitudes towards using Web Quest although poor perception of collaborative learning have been identified. Hence this study concluded that the integration of Web Quest in teaching and learning was suitable and applicable for Educational Psychology since most psychology courses require more visual learning and application to enhance understanding. Many studies reported the effectiveness of collaborative learning in enhancing students' learning outcomes which was contrary to the results of this study. Based on the interview results, the researcher believes that the main reason of ineffectiveness was the loss of control in class and students' feeling of isolation. The feeling of isolation will reduce when more collaborative learning is used in class. Therefore, this is teacher's responsibility to ensure that the class is under control.

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