Using WebQLM to Enhance Performance in Argumentative Writing among Year 12 ESL Students

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Abstract

This study investigated the impact of a designed web-based learning module on Year 12 students' learning of argumentative writing. The module known as WebQuest Learning Module or WebQLM comprises four units of learning. The subjects were 68 Year 12 Arts Stream students in an urban school in Penang. The main objective of this study was to investigate the effect of WebQLM on students' performance in argumentative writing as well as students' responses towards the integration of this web technology in the ESL classroom. The paired-samples T-Test revealed significant improvement in students' argumentative writing performance. Findings from the questionnaire and group interviews showed students generally responded positively towards the use of WebQLM in argumentative writing instruction. This study has brought to light the importance of integrating web-based learning tasks in the classroom. The credibility of the teacher in web-based instruction depends very much on the roles he or she plays in designing, scaffolding, facilitating and aspiring students towards a better learning culture. Implications on the teaching and learning of writing in an ESL context, especially for learners in the contemporary digital culture, can be drawn from the findings.

Keywords: Argumentative Writing, Technology Integration, Web-Based Learning Tasks, WebQuest

1. Introduction

In the new information age, many educators, policy makers and other stakeholders are adhering to the new paradigm of education of the 21st century. What is this new paradigm of education? Many refer to it as the new literacy in instruction or education using networked information and communication technologies in the classroom. Many schools and institutions in both developed and developing countries have incorporated new technologies in education. In the light of technology-based education, Malaysia also recognizes the critical need to integrate Information and Communication Technology or ICT in the teaching and learning of the English language.

The Internet is progressively used as a Web-based learning environment. Its attractive feature of offering access to an enormous amount and variety of information allows students to be involved in many authentic activities, especially in relation to English Language learning and use. According to the statistics given by the U.S. Department of Educational Technology (2004) and Web-based Education Commission (2000), the Internet has become an important context for teaching and learning. It is argued that information gathering is perhaps the most widely used application of the Internet (Hill et al., 2000).

Merriam and Caffarella (1999) state that the success or failure of online learning or web-based learning depends on the level of interaction occurring within a learning environment. They argue that only through the use of authentic tasks can such interaction take place effectively. In line with the call of the Malaysian government to integrate ICT and networked technologies in education, this study designed a web-based learning module and investigated its effects on the learning of argumentative writing in the classroom. The designed WebQuest Learning Module (given the name WebQLM) consists of four units of writing lessons. WebQLM is developed from WebQuest which is a popular web-based tool used by many for its pedagogical advantages. WebQuest provides a unique opportunity for integrating technology, scaffolding, collaborative learning and constructivism in effective writing instructional practices (Sen & Neufeld, 2006). Moreover, it does not only offer a structured inquiry-orientated learning method but also allows students to be actively engaged in tasks that elicit critical thinking as they take advantage of the vast range of information resources provided (Sanders, 2005). WebQuest will be discussed in greater detail in a later section.

2. Statement problem

English is a second language in Malaysia and many school learners struggle with mastering this language. Among the four language skills, writing seems to pose the greatest challenge. Malaysian ESL teachers, educators and the Ministry of Education are concerned over the issue of writing abilities among Malaysian students. The 2010 School Certificate Examination Report on English Language Paper 1 revealed that the majority of the candidates had not mastered an acceptable level of writing skills. Only a handful achieved high scores while some candidates did not even attempt the essay question (*Sijil Pelajaran Malaysia* Performance Report, 2010). From the Malaysian Examination Council (MPM) 2010 Year-end Malaysian University English Test (MUET) Report, out of 98,662 candidates from schools and institutions, 66.77% obtained below Band 3 (out of six bands) in writing argumentative essays in the MUET Writing Paper.

While there are many reasons for this poor performance, a very likely factor is a lack of content for the essay. It is undeniable that reading for information and knowledge from many resources can help students to acquire enough vocabulary and input to write well. According to Krashen (1984), the best way to learn to write well is to receive rich and comprehensive input from reading. The reading-writing connection thus advocates extensive reading to supply the skills, knowledge and input for students to write effectively. Chuo (2007) states that from the perspective of the reading to writing approach, there is no source other than the Web that is capable of providing such a wealth of easily accessible reading materials for writing input.

This paper reports the significant impacts of WebQLM as a web-based teaching and learning tool in ESL argumentative writing instruction in school. The focus is on two research questions, namely, '*To what extent has WebQLM improved students' performance in argumentative writing?* and '*How do students respond to the use of WebQLM in argumentative writing in the ESL classroom?'* Findings are significant for the future development of effective collaborative web-based learning in writing as well as reading instructions in the ESL classroom.

3. Literature review

3.1 Engagement Theory

Engagement Theory (Kearsley & Shneiderman, 1998) frames this study on learning writing in a webbed environment. The fundamental idea underlying Engagement Theory is that students must be meaningfully engaged in learning activities through interaction with their peers and the tasks. Engagement theory states that all learning ought to have three major characteristics, namely, collaborative, problem-based, and authentic. It espouses a constructivist philosophy, in which students are given the chance to create their own learning. Student activities that involve cognitive processes such as creating, problem-solving, reasoning, decision-making, and evaluation are specifically promoted. The role of technology in this theory is to facilitate all aspects of engagement or social networking using emails, weblogs, online conferencing, and Skype (Kearsley & Shneiderman, 1998). Hence, student's motivation to learn can be enhanced by appropriate activities planned in a meaningful learning environment.

Kearsley and Shneiderman's Engagement Theory (1998) provides guidelines specifically for ICT. Many curriculum developers have benefited from this theory (Marshall, 2007; Miliszewska & Horwood, 2006). Miliszewska and Horwood (2006) relate that Engagement Theory, espoused by Kearsley and Shneiderman, concerns creating successful collaborative teams that work on meaningful tasks involving three fundamental basic principles of engaged learning.

With the availability of technological resources, students learn to solve problems, seek information and understanding, and find ways to apply what they have learned personally and socially while teachers only act as facilitators in mediating disputes, giving approval, and establishing the social framework within which the learning occurs (Roblyer, 2003). Marshall (2007) has confirmed the relevance of the Engagement Theory in the study of the development and implementation of WebCT in teaching academic writing at the University of Sydney. The WebCT bulletin board was found to be very valuable as it encouraged students to collaborate and interact with one another.

3.2 Social Constructivism

Social constructivism emphasises the dynamic interaction between individuals in a learning environment, either between one learner and another or between a learner and the instructor and the assigned learning task. With this kind of interaction between individuals and the learning tasks, optimal learning is expected to take place. The learners possess the opportunity to construct their understanding from the presence of the dynamic interaction provided (McMahon, 1997).

From the social constructivist perspectives, knowledge is a human product and is socially and culturally constructed (Ernest, 1999; Gredler, 1997; Prawat & Floden, 1994). Individuals create meaning through their interactions with each other and with the environment they live in. Brandon and All (2010) also concur with the social constructivist stand in which learners can evolve their own knowledge foundations from collaboration and positive interactions among learners as well as between learners and instructors. In other words, students learn as active members of society and not as isolated individuals.

Advocates of social constructivism argue that meaningful learning only occurs when individuals are engaged in social activities and instructional models stress the need for collaboration among learners and with practitioners in the society (McMahon, 1997). Social constructivist approaches can include the use of technology methods and WebQuest in the classroom (Kim, 2001). The learners using WebQuest are not isolated individuals but members of dynamic groups.

3.3 Teacher's role in Technology Integration

Leu and Kinzer (2000) argue that the use of ICT in literacy instruction will become a continuous process to prepare children for a global economy which is based increasingly on information. Teachers and educators are required to play significant roles in preparing learners to cope with the changing constructions of literacy within new technologies.

The role of teachers is crucial to facilitate effective learning of the English Language as they have to make decisions, plan lesson materials and integrate appropriate web technology to bring about engagement among students. Besides teaching students how to evaluate the accuracy of information available online, teachers also play important roles in finding and evaluating technologies which are suitable and effective for their curriculum, students, and community (Smolin & Lawless, 2003).

Many times teachers have to design their own technology-based materials to provide students with specific and appropriate tasks to enable them to take greater responsibility in their own learning. Designing web-based learning instructions based on constructivist learning theories will help foster independent and life-long learning. In a constructivist perspective, integration of ICT in the learning environment supports and fosters greater autonomy among students. It is noted that ICT and other new technologies are used as tools by teachers and educators to help learners in constructing knowledge and representing their ideas. Moreover, these tools provide instant accessibility to an array of resources of information, authentic experiential learning situations and collaborative learning environments (Divaharan & Wong, 2003).

3.4 WebQuest and its Educational Benefits

The growing use of the Web for educational purposes has led to the development of many web-based technology tools for use in education. According to Nam and Smith-Jackson (2007), the use of the Web as an educational tool has provided teachers with a wide range of new and exciting teaching experiences that are not found in the traditional classroom. Among the online resources, WebQuest is regarded as one of the effective web-based tools which can contribute to language instruction and learning. Since 1995, when WebQuest was first introduced, it has been considered as an excellent example of how technology can be effectively integrated in instruction to engage students and promote inquiry-based learning.

WebQuest is a scaffolded learning structure which uses links to essential resources on the web and an authentic task to motivate students' investigation of an open-ended question, development of individual expertise, and participation in a group process that transforms newly acquired information into a deeper understanding (March, 2007). From the linguistic perspective, WebQuest is found to be beneficial for ESL/EFL learners in areas such as exposure to authentic materials, meaningful content and possibilities for real communication in the target language (Simina & Hamel, 2005). Stoks (2002) also states that WebQuest benefits language learning when students are engaged in a WebQuest activity. Students are being exposed to the target language when they surf the web and try to make sense of what they encounter. Skimming and scanning the web articles can help to increase their language comprehension.

3.5 Argumentative Writing

To write argumentative essays, learners need to acquire argumentation skills. They should be trained to develop the cognitive skills of, for example, giving justification and rational ideas to solve particular problems or situations. Dickson (2004) states that forming and holding beliefs, making judgments, and considering opposing views when making decisions in one's life are basically the significant thinking skills required. According to Crowhurst (1988), students' performance in argumentative writing or persuasive writing is not as good as their performance in narrative writing. School students, particularly second language students find learning to write argumentative essays very challenging due to typical weaknesses like lack of support for reasons, poor organization, and immature language. Argumentative writing is considered more difficult than narrative writing because it requires argumentation and higher level cognitive skills. Cited in Saito (2010), argumentative writing is complex due to the features of argumentation itself in which the writer takes his/her position on a controversial issue and justifies by giving reasons and supporting evidence to convince the reader.

4. Methodology

4.1 Research Design and Participants

This study investigated WebQLM's impact on writing performance by using a single pretest-posttest experimental research design. The sample was purposively selected; targeting only two intact classes of Lower Form Six Arts Stream students for the WebQLM instruction. The number of participants was 68. The duration for the instruction was 3 weeks or 12 lessons (80 minutes per lesson).

4.2 Instruments

4.2.1 WebQLM

The main instrument in this study was the designed WebQLM (WebQuest Learning Module) on argumentative writing. This module comprising four units was designed using Zunal WebQuest Maker. All units were compiled and made accessible at http://circlepad.com/WebQLM. The units or topics in this WebQLM are as follows:

1. Unit 1 - *Introduction to Argumentative Writing- Playing Video Games: Good or Bad?*

2. Unit 2 - *Cell Phone: Is it a necessity at school?*

3. Unit 3 - *Bioengineering Food-A Harvest of Fear?*

4. Unit 4 - *Human Cloning: Dead or Alive?*

4.1.2 Pre-test and Post-test

The pre-test used was an argumentative writing test which required the participants to write within a stipulated time of 50 minutes. The essay in this pre-test was evaluated based on the MUET standardized marking scheme for extended writing. The post-test was similar to the pre-test and administered on the day immediately after the intervention.

4.1.3 Questionnaire

At the end of the WebQLM instruction, students were asked to respond to a questionnaire consisting of sixteen items concerning the designed WebQLM. A five-point Likert scale ranging from 1 to 5 was used where 1 represented 'strongly disagree' and 5 'strongly agree.' The Cronbach alpha of this questionnaire had a reliability coefficient of 0.78. In this questionnaire, students also had to answer four open-ended questions and one multiple responses question to further elicit their perceptions of WebQLM.

4.1.4 Interviews

Two semi-structured focused group interviews were conducted on six student volunteers. The purpose was to gain more in-depth information on these students' orientations towards the use of WebQLM.

4.3 Data Collection Procedures

There were two phases in this study. The first phase was the development of WebQLM. The second phase was the implementation of WebQLM on the 68 participants from two Year 12 Arts Stream classes. Prior to the intervention, a pre-test was administered on all the students simultaneously. Next, they were taught how to use WebQuest generally in a demonstration session whilst the teacher participant had to undergo a three-hour training session on using WebQLM to teach. Subsequently, the writing instructions using WebQLM were carried out. A post-test was administered followed by the questionnaire. Two semi-structured focused group interviews were conducted on six volunteers.

4.4 Data Analysis Procedures

Quantitative and qualitative data were analysed to obtain answers to the two stated research questions. The paired-Samples T-Test was employed to test the hypothesis for question one. This was followed by the analysis on the students' responses in the questionnaire. All responses from the students' written responses were organized according to codes and categories to give a clearer and more systematic picture of the variations in views and responses. Subsequently, data obtained from the interview transcripts were compared and analysed across six cases to describe students' responses to the use of WebQLM in the ESL writing classroom. The research questions are as follow:

1. RQ1: To what extent has WebQLM improved students' performance in argumentative writing?'

2. RQ2: How do students respond to the use of WebQLM in argumentative writing in the ESL classroom?

The null hypothesis for this study is: There is no significant difference between the pre-test and post-test scores in argumentative writing of the students.

5. **Results**

5.1 Paired Samples T-Test

The results of the paired sample t-test, means and standard deviations of the pre-test and post-test writing scores are presented in Table 1. The statistics indicated an improvement in the participants' argumentative writing performance.

Table 1. Paired Samples T-Test Results between Pre-test and Post-test Scores

Pair	Mean	SD	Std. Error Mean	95% Confidence Lower	95% Confidence Upper	t	df	Sig2-tailed
Posttest	47.78	10.31						
			0.64	8.99	11.54	16.12	67	0.00
Pretest	37.51	9.92						

Significant at a confidence level of p<0.025 (2-tailed)

The pre-test mean score was 37.51 (SD 9.92) while the post-test mean score was 47.78 (SD 10.31). Hence, students had obtained higher scores in argumentative writing after receiving the WebQLM instruction, with an average gain of 10.27. The paired samples t-test found the difference between post-test and pre-test scores to be statistically significant, where t (67) = 16.12, p =0.00. Thus, the null hypothesis (*There is no significant difference between the pre-test and post-test scores in argumentative writing*) was rejected. Therefore, it can be concluded that WebQLM has helped these Year 12 students improve their argumentative writing to a significant extent.

5.2 Questionnaire Analysis

Findings from the questionnaire showed that students responded positively towards the use of WebQLM in the argumentative writing instruction. Table 2 shows the quantitative results while Table 3 shows the qualitative analysis of students' written responses to the four open-ended questions. The responses to the two negative statements in the questionnaire were reversed for analysis.

Table 2. Means and Standard Deviation of Students' Responses on WebQLM

Statements	Mean	SD
The roles given are clearly explained for completing the project	3.91	0.62
The tasks given are based on real life situation	3.79	0.91
The activities progress from basic knowledge to a higher level of thinking	3.79	0.91
The navigation is clear and easy to follow	3.79	0.92
The resources provided are useful for learning	3.78	0.94
Information and resources provided are relevant to the topic	3.78	0.83
The grading is clearly stated in the evaluation rubric for self-evaluation and feedback	3.74	0.79
The stages in WebQLM are stated clearly to guide me to complete the tasks successfully	3.74	0.97
The tasks given in each WebQuest in WebQLM are easy to understand	3.68	0.85
It is easy to use WebQLM	3.68	1.00
The links to all resources are not easy to use	3.60	1.01
The activities provided are very engaging	3.53	1.03
The activities are not very interesting	3.52	1.02
The graphics in WebQLM are appealing	3.51	0.94
The activities are clearly designed for my language ability level	3.47	1.03
All the activities can be done within the time given	3.44	0.80
Overall Mean Score	3.67	0.14

From Table 2, the item on the roles given in WebQLM has the highest mean score (m=3.91). Many students agreed the roles in WebQLM were well explained and assisted them in the writing tasks. They felt they were scaffolded or guided throughout the learning process to complete the projects or tasks given. Next, sharing the same mean score of 3.79 are the items on progression from easy to harder activities, authentic or real life tasks and easy navigation. This shows that the majority of the students agreed that the resources and information were useful and relevant for learning, especially in argumentative writing. As for the WebQLM activities, many students perceived these activities to be very interesting and engaging. The lowest mean is for the allocation of time provided for them to complete the activities or tasks in WebQLM. Overall, the mean score is 3.67 indicating students' positive response towards WebQLM.

All data collected from students' written responses to four open-ended questions and one multiple responses question were categorized according to codes and categories. The categories for each code are tabulated in Table 3.

Table 3. Codes and Categories of Students' Responses in the Open-ended Questions

Codes	Categories	Examples of Responses
Like	1) Useful Information and Resources 2) Interesting Authentic Activities 3) Scaffolded Tasks 4) Teamwork and Collaboration 5) Web-based Learning Tasks 6) Beneficial Aspects	*"relevant and useful info given; interesting activities for learning; I like the real and interesting topics; step-by-step guided tasks; tasks given are clear and helpful; group activities encourage teamwork and collaboration ; learn English through the websites; help improve knowledge and skills in writing"*

Dislike	1) Amount of Tasks 2) Time Constraint 3) Internet Connection	*"too many tasks to complete ; time given to complete task is too short; slow loading of websites"*
Benefits Gained	1) Extra Useful Knowledge 2) Improve Writing Skills 3) Experience Teamwork 4) Communication Skills	*"gain extra new knowledge; learn techniques to write argumentative essays; improve writing skills; learn writing through group activities ; share and work with group members; learn to share opinion"*
Challenges (Problems)	1) Internet Connection Problems 2) Insufficient Time/Time Constraint 3) Language Competency Constraint 4) Internet Inaccessibility at Home	*"slow connection or loading; not enough time to complete tasks; lack of time to do the tasks; difficult to understand certain words; no Internet access at home"*

There is some variation in the answers to the first open-ended question, "*What do you like about WebQLM?*" From the students' written responses, there are six identified categories of what they liked about WebQLM: (1) useful information and resources, (2) interesting authentic activities, (3) scaffolded tasks, (4) teamwork and collaboration (5) web-based learning tasks, and (6) beneficial aspects. The majority of the students responded that they liked WebQLM due to its usefulness, relevance, authenticity and easy access to information and resources. Three aspects gleaned from the second question "*What do you dislike about WebQLM?*" are (1) amount of tasks, (2) time constraint, and (3) Internet connection. The highest number of complaints is related to the number of tasks they had to accomplish within a short period of time.

The third open-ended question is related to the benefits gained from the use of WebQLM. There are four categories of benefits gained: (1) extra useful knowledge, (2) improve writing skills, (3) experience teamwork and (4) communication skills. The majority of the students expressed that they gained extra useful knowledge they had never learned before and benefited quite a lot in learning the techniques to write argumentative essays. Nearly one third of the 68 student participants related that they had learned a lot about teamwork while completing the tasks together. Some others felt they had improved in their communication skills when they shared, discussed and built relationships with their peers.

From the feedback gathered on the problems faced, there were four categories: (1) Internet connection problems (2) time constraints, (3) lack of language competency, and (4) Internet inaccessibility at home. Many student participants responded that the time given to complete the tasks was too short. They claimed that they could not finish the tasks on time, especially for the more difficult tasks. A few students less proficient in English felt they were unable to understand some of the information from the web resources in WebQLM

Analysis from the multiple responses question revealed that there were many students (72.1%) who chose the '*step-by-step guided tasks*' as the main characteristic that motivated them to learn argumentative writing in WebQLM instruction. This was followed by 58.8% who chose the user friendly learning website. The ranking of WebQLM motivational characteristics among students is presented in Table 4.

Table 4. The Ranking of WebQLM Motivational Characteristics

	Frequency	Percent (%)
step-by-step guided tasks	49	72.1
user friendly learning website	40	58.8
relevant and useful information	35	51.5
easy navigation to all links and resources	34	50.0
interesting resources	34	50.0
interesting activities	27	39.7
interactive multimedia	24	35.3
appealing graphics	22	32.4
self-evaluation rubric for reinforcement	13	19.1

About half of the students believed that the relevance and usefulness of information (51%), easy navigation (50%) and interesting resources (50%) also motivated them to learn. On the contrary, the self-evaluation rubric in the WebQLM was least motivating. Generally, students responded positively towards WebQLM due to its step-by-step guided tasks which motivated them to learn argumentative writing.

5.3 Interviews

Findings from both focused group interviews were consistent with the findings above. The students generally perceived WebQLM to be a fun, useful and informative module which had helped them to write argumentative essays. They expressed that WebQLM provided the steps, techniques and ideas on how to write this text-type. The scaffolding afforded by WebQLM was particularly highlighted, as in comments like, "*step-by-step guided tasks helped me to write better; easy steps to learn to write essays; WebQLM can help my language skills step-by-step; I can learn to write through the guided activities; I learn writing skills step-by-step.*"

WebQLM activities and tasks catered to the needs and preferences of different students. It was evident that different activities in WebQLM seemed to appeal to different students. Student S claimed that she liked the activities on Human Cloning (Unit 4) and Bioengineering Food (Unit 3) in which she created the pamphlet and scrapbook with her group members. She said that it was better doing it on the web than using the traditional method. Additionally, student F preferred to do the newsletter on Genetic Modified Food (Unit 3) as it gave her the chance to discuss with her group members and contributed to her learning. It was also noted that she enjoyed all the activities in this topic whose novelty motivated her to learn. To quote student F:

> F : *I think the topics made me want to learn more. Especially the topic on the Bioengineering Food because I feel it is very interesting. I never learned this before so I enjoyed the activities in this topic.*

Meanwhile, Student L preferred the activity to do research and gather information about cell phones. She likened this interesting activity to a debate as she could acquire a lot of information on the advantages and disadvantages of using cell phones in school. K mentioned he liked to do the scrapbook on Bioengineering Food in Unit 3. D liked the Human Cloning activities while W liked the activities Video Games. The following excerpts show the range of preferences for the activities in WebQLM.

> L : *I prefer the pros and cons of cell phones. Because I really can know so many advantages and disadvantages of cell phones and it is like debate and I feel it is interesting.*
>
> K : *I like the scrapbook on Bioengineering Food.*
>
> D : *Hmm...I like Human Cloning.*
>
> W : *I like Video Games activities.*

In sum, teaching with WebQLM has brought fruitful results. The students' comments above generally point to the important part played by the teacher in carefully selecting resources and pitching tasks at the appropriate level so as not to turn students away. Indeed a WebQuest provides learners with a structured environment, specific steps for completing the task, and a list of appropriate resources for data compilation for project work or task (Skylar, Higgens & Boone, 2007). They argue that proper scaffolding or guidance can help learners in processing the information.

6. Discussion

The findings in this study have revealed that the use of WebQLM in argumentative writing instruction did improve students' performance to a significant extent. The paired samples t-test has provided evidence that the ESL students demonstrated significant improvements in their argumentative writing with an average gain score of 10.27, $p \leq 0.05$. These findings support studies by Boxie and Maring (2002), Al-Jarf (2004), Chuo (2007), Termsinsawadi and Wasanasomsithi (2009) and Kargozari and Ghaemi (2010) which reveal the positive outcomes of the integration of web-based writing instruction. Findings from these previous studies indicate that students' achievements had significantly improved, very likely from their engagement in language learning through using web resources.

According to Seale and Rius-Riu (2001), learning technologies have added value to both the efficiency and effectiveness of the learning process. Besides, Kargozari and Ghaemi (2010) proved their Iranian EFL learners became more competent and could write fluently and communicate easily while Termsinsawadi and Wasanasomsithi (2009) found that the implementation of their web modules was effective in enhancing both the students' reading and writing abilities. These findings support web-based learning to improve students' writing performance and confirm that the use of web technologies in the classroom could lead to higher levels of engagement and higher motivation in accomplishing tasks. The designed WebQLM in the present study allows students to explore carefully the selected resources and make effective use of the Internet to perform writing tasks. WebQLM activities involve dynamic interactions and collaboration among the group members to achieve shared goals. So, it is noteworthy that the scaffolded activities in WebQLM help students to experience higher levels of engagement and meaningful learning that leads to better writing performance.

Three major points stand out from the students' written responses on WebQLM. The first was related to its usefulness as a web-based learning module which provided students with useful information and resources. This agrees with Zheng et al.'s (2008) views that WebQuest supports knowledge application, social skills and scaffolded learning when students are given the opportunities to construct new knowledge from acquired knowledge. Another major finding was the ability of WebQLM activities and tasks to promote teamwork and collaboration. Students perceived WebQLM as a beneficial web-based learning tool that supported learning to gain extra knowledge and improve their argumentative writing skills. The third major finding was related to the scaffolded tasks. In order to help students improve their writing skills and increase motivation towards writing, WebQLM tasks were scaffolded and pre-planned in progression from easy to difficult but with achievable steps towards the goals. Activities or tasks designed for an online learning environment should be 'scaffolded' in achievable steps within a collaborative setting to provide guidance for inexperienced students (Jonassen & Land, 2000).

7. Implications and conclusion

This study has brought to light the importance of integrating web-based learning tasks in the classroom. Based on the major findings of the study, there are some pedagogical implications of web integration for the teaching and learning of argumentative writing in the ESL classroom. The implications are:

a) ESL teachers should adopt the new literacy approach using web technology integration to teach writing. In designing a well-planned web-based learning tool, the selection of authentic resources and information, scaffolded tasks, duration of tasks and level of tasks need to be carefully considered.

b) Teachers play crucial roles in evaluating and selecting materials for online teaching and learning. Teachers have to be very careful in their selection of materials or resources based on authenticity, relevance to the topic, students' level of competence, interests and needs. The pre-selected materials together with the scaffolded activities can help students build in-depth understanding on specific issues before they can create new understanding or perspectives to attain their writing goals.

c) Different kinds of language skills can also be integrated via web technology. A well-planned online learning tool should allow students to expand their abilities and improve their performance in speaking, listening, reading and writing.

This paper has discussed the effectiveness of a web learning module to teach argumentative writing at Year 12 level in an ESL context. The module of four writing units has been developed using sound principles and software programmes available online. For the students the outcomes are centred on active engagement in the web-based tasks designed.. For teachers and educators, the message is on their crucial role in using new technologies to promote authentic and meaningful learning. Undoubtedly, the wide range of resources accessible on the Internet can be used to support a meaningful social constructivist learning environment.

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APPENDIX

<div align="center">

Questionnaire

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Please answer all the questions as honestly as possible. All information will be kept confidential. Thank you very much for your cooperation.

Directions:*Please circle the degree of your agreement to each statement below.*

    1   Strongly disagree

    2   Disagree

    3   Neither agree nor disagree

    4   Agree

    5   Strongly agree

1	It is easy to use WebQLM	1	2	3	4	5
2	The navigation is clear and easy to follow	1	2	3	4	5
3	The links to all resources are not easy to use	1	2	3	4	5
4	The graphics in WebQLM are appealing	1	2	3	4	5
5	The activities are clearly designed for my language ability level	1	2	3	4	5
6	The activities are not very interesting	1	2	3	4	5
7	The activities progresses from basic knowledge to a higher level of thinking	1	2	3	4	5
8	Information and resources provided are relevant to the topic	1	2	3	4	5
9	The resources provided are very useful for learning	1	2	3	4	5
10	The roles given are clearly explained for completing the project	1	2	3	4	5
11	The tasks given in each WebQuest in WebQLM are easy to understand	1	2	3	4	5
12	The stages in WebQLM are stated clearly to guide me to complete the tasks successfully	1	2	3	4	5
13	The activities provided are very engaging	1	2	3	4	5
14	The tasks given are based on real life situation	1	2	3	4	5
15	All the activities can be done within the time given	1	2	3	4	5
16	The grading is clearly stated in the evaluation rubric for self-evaluation and feedback	1	2	3	4	5

Comments on the Characteristics and Features of the Designed WebQLM

Directions: *Please write your answers in the space provided.*

1. What do you like about WebQLM?
_____

2. What do you dislike about WebQLM?
_____

3. What have you gained from this WebQLM module?
_____

4. What problems did you face when you were engaged in the WebQLM ?

_____

5. What are the characteristics in this WebQLM that motivate you to learn?

   Please tick your answers. You can tick more than one aspect.

user friendly learning website	
easy navigation to all links and resources	
appealing graphics	
interesting resources	
relevant and useful information	
Interactive multimedia	
interesting activities	
step-by-step guided tasks	
self-evaluation rubric for reinforcement	