Development and Validation of WebQuests in Teaching Epics

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Abstract - *Using the Research Development (R&D) methodology, the study aimed to develop and validate WebQuests which can be used in literature subjects, particularly in the tertiary level to address the need of literature teachers for pedagogy in the teaching of epics. The development of the Web Quests was anchored on the Theory of Constructivism. Two groups of experts validated the Web Quests – the literature experts and the ICT experts. The Content Validation Checklist, used by the literature experts, was utilized to evaluate the content of the Web Quests. Meanwhile, the Rubric for Evaluating Web Quests, used by the ICT experts, was utilized to evaluate the design characteristics of the Web Quests. Computed weighted means using range interval of point scores were employed to treat the data gathered from the evaluation conducted by both group of experts. The Web Quests developed contain five major parts which include: 1) introduction; 2) task; 3) process; 4) evaluation; and 5) conclusion. Based on the findings, the content of the Web Quests developed are valid in terms of objectives, activities and instructional characteristics. Likewise, the design characteristics of the Web Quests are excellent in terms of introductions, tasks, processes, resources, evaluations, conclusions and overall designs. Thus, the Web Quests developed are acceptable and can be utilized as instructional materials by literature teachers in the teaching of epics.*

Keywords – *Information and Communication Technology, instructional materials, teaching epics, Web Quests*

INTRODUCTION

Imparting knowledge to young people is a rewarding experience. However, according to Barron et al. [1], helping students to see connections to what they learn and how it relates to their daily lives is a challenge yet it is exciting to see the "aha" moment of students grasping a concept. What can be even more exciting to see is the role of technology in creating meaningful experiences. In fact, technology is a powerful tool for students; computers provide students access to any kind of information.

Being the Intel Training Hub in Region I Philippines, the Mariano Marcos State University College of Teacher Education (MMSU-CTE) has started to embrace the use of technology in instruction. Teachers in the institution have attended several trainings to equip themselves with necessary skills for them to ably integrate Information and Communication Technology (ICT) in the teaching-learning process. However, teachers show their great concern on the dearth of ICT-based instructional materials to be used in the teaching of subjects offered in the two degree programs.

Specifically, the teachers of literature at MMSU-CTE expressed their sentiments on the lack of relevant instructional materials to be used in the teaching of epics. The teachers indicated that they have difficulty in teaching epics since it is lengthy and that it cannot be covered in a day's lesson. Also, they find epics uninteresting to students. Thus, they are challenged to find means in teaching epics in a well-engaging manner. Since the teachers consider the use of ICT in instruction influential to student learning, they find it challenging to teach epics with the use of ICT tools, particularly the Internet. They believe that through the use of ICT tools, the students become well-engaged in the learning process. In the long run, they become active learners who will personally construct their own learning using their critical-thinking and problem-solving skills.

One way to promote motivation and interest among learners is the use of WebQuests. According to Dodge [2], this activity is an inquiry-oriented and student-centered activity in which some or all of the

information that learners interact with come from resources on the Internet. It poses a real life situation in which students work cooperatively to solve a problem. They research their topic, using appropriate technology tools. In fact, the internet provides current information and access to hosts of experts whom students can contact via e-mail. The students create a finished product that is meaningful and relevant to the real world. This technology-based strategy promotes camaraderie among students as they work cooperatively and students receive immediate feedback from others within their groups. Likewise, when students work together, it lowers stress and anxiety levels, which promotes an enriching and stimulating learning environment for all.

There had been a lot of ICT-based materials developed. Some can be easily accessed online. However, only few exist along literature, particularly on the teaching of epics. Believing in the facets of WebQuests, the researcher thought of developing WebQuests that may be used in the teaching of epics. Through this study, the need for the pedagogy in the teaching of epics in the institution will be addressed and that learning of epics among students would become meaningful and well-engaging.

Primarily, this study is beneficial to students since they could be provided with more opportunities to study epics in a technology-based perspective. Also, this study is of great help to the teachers of literature in the tertiary level for they could be offered with a new dimension in the teaching of literature, particularly epics.

The use of WebQuests in the teaching of epics is anchored on the Theory of Constructivism. Constructivism is a theory of knowledge with roots in philosophy, psychology and cybernetics. Such is the definition provided by constructivist's leading theorist, E. von Glasersfeld [3]. The theory, according to Vygostky [4], underscores that learning is an active process where learners acquire and construct new ideas or concepts based on their past or current knowledge and experiences. In any case, according to Matanluk et al. [5], the learners are active creators of their own knowledge since they are free to operate in a conducive learning environment. Therefore, to learn is to experience, that is to interact with one's environment; to do, to feel, to sense, to handle and to perceive the opportunities.

Anchored on the said theory, the conceptualization of this work proves that WebQuests may be used in literature teaching in the tertiary level. It also proves that WebQuests are applicable in the teaching of literature, particularly epics. Likewise, the use of WebQuests in the teaching of epics could help transform passive learners into active ones, making them more engaged in the learning process.

OBJECTIVES OF THE STUDY

The study aimed to develop WebQuests in teaching epics. Furthermore, it endeavored to validate the WebQuests developed in terms of content (objectives, activities and instructional characteristics) and design characteristics (introduction, task, process, resources, evaluation, conclusion and overall design).

METHODS

This study followed the Research and Development (R&D) methodology, designed to develop and validate instructional and teaching materials so that they can be made available to a vast area.

The Mariano Marcos State University College of Teacher Education situated in Laoag City, Philippines was chosen as the locale of the study. The said institution is considered as one of the Centers of Excellence among Teacher Education Institutions (TEIs) in the country. Moreover, the institution serves as the Intel Training Hub in Region I, Philippines. In its BEEd and BSEd programs, particularly in its general education curriculum, literature subjects, of which epics are taught, are offered.

Procedure

Prior to the development of the WebQuests, a survey on the common epics taught in the literature subjects among eight teachers of literature was conducted to identify the epics to be included in the materials. From the survey, the following epics were identified by the teachers: 1) Odyssey by Homer; 2) The Ramayana by Valmiki; 3) The Divine Comedy by Dante Alighieri; 4) Beowulf by an anonymous; and 5) Aeneid by Virgil.

In the process of development, the following steps were followed: 1) formulating carefully selected tasks and objectives; 2) writing steps and procedures that are to be followed by the students in going through the activity; 3) searching well-chosen links to high-quality Internet-based resources; 4) embedding hyperlinks; and 5) creating rubrics or scoring guide

necessary for assessment. To start and end the WebQuest was the hardest part of the process for the researcher had to make sure that the introduction is interesting and motivating to the students and that the conclusion summarizes what the teacher hopes the students have learned after completing the activity. Notably, the development of the WebQuests was based on the principles of Constructivism.

The WebQuest developed is an instructional tool in an inquiry-oriented lesson format, which was designed using a web page suitable for the World Wide Web and web browsers. It contains texts, graphics and hyperlinks to other web pages and files in which most or all the information that learners work with comes from. This instructional tool would be available online. Thus, Internet is highly important to run this tool for use in class.

Each WebQuest developed contains the following sections: 1) Introduction; 2) Tasks; 3) Process (with embedded Resources); 4) Evaluation and; 5) Conclusion. The researcher carefully planned on how to fit the chosen epics to the WebQuest Learning Design developed by Dodge [2].

Two-panel of experts evaluated and validated the WebQuests developed. The first panel included the three experts along literature, while the second panel involved the three ICT experts. The first group of experts validated the content of the WebQuests developed using The Content Validation Checklist patterned after the Constructivist Module Checklist of Yager[6] from the Constructivist Learning Model: Towards Real Reform in Science Education and the Constructivist Checklist of Murphy[7]. Meanwhile, the second group of experts validated the material developed using the Rubric for Evaluating WebQuests developed by Dodge [2].

The result of the evaluation, including the comments and suggestions given by the experts served as basis in the improvement of the WebQuests developed.

Instrument

There were two research instruments used in this study. These include the Content Validation Checklist and the Rubric for Evaluating WebQuests.

The Content Validation Checklist was used to evaluate the content of the developed WebQuests in terms of their objectives, activities and instructional characteristics. In scoring the responses to the items in the checklist, the given scale was used: 5 - Highly Valid (HV); 4 - Valid (V); 3 - Moderately Valid (MV); 2 -Slightly Valid (SV); and 1 -Not Valid (NV).

On the other hand, the Rubric for Evaluating WebQuests was used to evaluate the design characteristics of the WebQuests in terms of introduction, task, process, resources, evaluation, conclusion and overall design. In scoring the responses to the items in the rubric, the given scale was used: 3 – Excellent (EX); 2 –Good (GD); and 1 – Poor (PR).

Statistical Treatment

The computed weighted mean was used as the statistical tool to interpret the gathered data.

In the case of the content validation made by the literature experts, the computed weighted means were interpreted using the given range interval of point scores: 4.51-5.00: Highly Valid (HV); 3.51-4.50: Valid (V); 2.51-3.50: Moderately Valid (MV); 1.51 – 2.50: Slightly Valid (SV); and 1.00 – 1.50: Not Valid (NV).

Meanwhile, the computed weighted means from the evaluation made by the ICT experts on the WebQuests' design characteristics were interpreted using the following given range interval of point scores: 2.34 – 3.00: Excellent (EX); 1.67 – 2.33: Good (GD); and 1.00 – 1.66: Poor (PR).

RESULTS AND DISCUSSION

WebQuests in Teaching Epics

With the foregoing need of ICT-based materials in the teaching of epics and inspired by the six elements and the facets of WebQuests, the WebQuests in teaching epics developed contain the five major parts, namely: 1) Introduction, 2) Task, 3) Process (with embedded Resources), 4) Evaluation, and 5) Conclusion.

The introduction provides the students background information or overview of the learning goals on a topic and sets the stage for the investigation or activity. This part of the WebQuest motivates the students to learn more and explore the topic in depth. This motivational component excites and arouses the students' interests making the activity desirable and fun for them.

The task contains the formal description of what students will have to accomplish by the end of the activity. This includes an activity that is "doable" and is of interest to the students. Moreover, this part allows students to think critically and assess and

calibrate their efforts as they begin working on the project.

The process describes the steps or guides the learners should do in accomplishing the task and for the completion of the whole activity, with links or resources embedded in each step and wherein scaffolds are provided. In this part, students are grouped into small ones and are given each member a particular role to perform. Here, learners of different skills and backgrounds collaborate in constructing knowledge and in accomplishing the task. This portion also provides links to high-quality internet-based resources that students use to complete the whole activity.

The evaluation offers tools or instruments, like the scoring guide or rubrics to be used in evaluating students' output. This part illustrates to students exactly what they should do to be successful. Its standards are fair, clear, consistent, and specific to the task being set.

The conclusion brings closure to the activity. This section allows students for reflection and teachers to summarize what they hope their students have learned as a result of completing the activity. Furthermore, this encourages students to suggest ways of doing things differently to improve the lesson. More importantly, this part encourages students to extend their recently gained knowledge to other domains.

The six facets of a WebQuest served as parts of the WebQuests developed except for the element, resources, which is embedded in the process. All these elements are interdependently used in the WebQuests developed. Each element is essential to the other and that nothing must be missing to attain a constructivist learning environment.

Content Validity of the WebQuests

The content validity of the WebQuests in terms of objectives, activities and instructional characteristics are hereby presented in this section.

Table 1 shows that the developed WebQuests have valid objectives as indicated by the overall mean of 4.00. This means that the objectives are acceptably specific, attainable, observable and stated. Moreover, the objectives are adequately practical and relevant and conform to the activities presented in each WebQuest.

The objectives of the WebQuests were given a satisfactory rating of 4.00. One of the experts found difficulty in identifying the instructional objectives of each WebQuest; the objectives are hard to recognize in the WebQuests.

Table1. Mean ratings of the WebQuestsin terms of objectives.

Criteria	Mean	VI
A. Objectives		
The objectives:		
1. are specific.	4.00	V
2. are attainable.	3.80	V
3. are observable.	3.93	V
4. are clearly stated.	4.07	V
5. practical and relevant.	4.13	V
6. conform with the activities presented.	4.07	V
Overall Mean	**4.00**	**V**

Legend: V- Valid

As a result, the said expert suggested that there should be a separate part for the learning objectives of the WebQuests so the students will be directed and given the idea of the skills they are expected to develop while accomplishing the project. This finding conforms to the claim of Laroza [8] that when learning objectives are clearly stated the great assistance to the students to have full understanding of the concepts to be discussed, accessible and achievable.

Thus, such suggestion prompted the researcher to incorporate instructional objectives as separate section of the WebQuests developed.

Informing students about the objectives of a lesson gives them a sense of direction in the learning process. The objectives serve as guide for the students as they accomplish a learning task or goal. With the objectives, expectations are set, thus making them more aware of what they are expected to accomplish in class.

Table 2 shows that the activities in the WebQuests are highly valid with an overall mean rating of 4.93. This implies that the activities are learner-controlled, interesting, challenging, innovative and empowering that can make students enjoy working on the WebQuests. Moreover, it can be deduced from the data that the activities maximize students' participation and involvement in class. Furthermore, the objectives encourage critical, analytical and higher-order thinking skills among the students. These results conform to the claim of Chandler [9] about the need to empower students to think and construct knowledge for themselves, as the main aim of constructivist teaching.

Table 2. Mean ratings of the WebQuests in terms of activities

Criteria	Mean	VI
B. Activities		
The activities:		
1. are learner- controlled.	4.93	HV
2. are interesting and enjoyable.	5.00	HV
3. maximize students' participation and involvement.	4.93	HV
4. are challenging, innovative, liberating or empowering.	4.93	HV
5. encourage critical, analytical and higher-order thinking skills.	4.93	HV
6. encourage knowledge collaboration.	4.80	HV
7. encourage knowledge construction.	4.93	HV
8. seek to relate new learning to previous learning.	5.00	HV
Overall Mean	**4.93**	**HV**

Legend: HV- Highly Valid

Furthermore, the activities in the WebQuests support knowledge collaboration, facilitate knowledge construction and seek to relate new learning to previous learning. According to Brunner and Good now [10], such characteristics adhere to Bruner's theory, which emphasizes the importance of previous experiences in the construction of new knowledge. All these indicate that the activities in the WebQuests exhibit constructivist perspectives. Thus, the activities are suitable to the attainment of the objectives of the WebQuests and they arouse students' interests and interaction, which are necessary in the construction of new concepts.

Activities in lessons that highly engage learners into action encourage meaningful learning. Thus, teachers, have to employ student-centeredactivities for the students to personally construct their own knowledge. It is only through student-centered activities that the students find meaning into what they are learning. Hence, the result conforms to the constructivist principle, which according to Matanluk et al. [5], that to learn is to experience, that is, to interact with one's environment, to do, to feel, to sense, to handle, to perceive and so on.

Table 3 shows that the literature experts rated the WebQuests' instructional characteristics as highly valid as reflected by the overall mean of 4.76. They agreed that the WebQuests' instructions exceptionally arouse and sustain interests of students. Moreover, they agreed that the instructions are remarkably clear, accurate and easy to understand. The instructions do not fail to introduce ideas in logical sequence and encourage creative critical thinking among students.

The result was supported by the finding of Cruz [11] in his study that learners can easily follow system of instruction because the style and presentation are effective. Further, she stated that learning outcomes depend on well-stated and well-defined instructions.

Table 3. Mean ratings of the WebQuests in terms of instructional characteristics.

	Mean	VI
C. Instructional Characteristics		
The instructions:		
1. are logically arranged.	4.80	HV
2. arouse interests and sustain attention.	4.74	HV
3. encourage creative critical thinking.	5.00	HV
4. are clear, accurate and easy to understand.	4.53	HV
5. promote active participation and response among students.	4.73	HV
Overall Mean	**4.76**	**HV**

Legend: HV- Highly Valid

With all the indications made, it can be said that the WebQuests' instructions are indeed highly valid.

One reason why learners fail to arrive at the expectations or objectives of a lesson is because of poor instructions. Teachers, therefore, have to provide clear and effective instructions when giving tasks to students. Consequently, giving students clear and effective instructions triggers and sustains their curiosity in the lesson.

Table 4.Summary of the results of the experts' content validation of the WebQuests

Criteria	Component Mean	Descriptive Interpretation
Objectives	4.00	V
Activities	4.93	HV
Instructional Characteristics	4.76	HV
Overall Mean	**4.56**	**HV**

Legend: HV- Highly Valid

Table 4 shows the overall evaluation of the WebQuests. The component means of 4.00 for objectives, 4.93 for activities and 4.76 for instructional characteristics indicate that the developed WebQuests are valid. These results therefore imply that the WebQuests meet the standards of a quality WebQuest.

With all the indications, the overall mean of 4.56

denotes that the WebQuests have valid contents for they manifest constructivist perspectives and activities that are adequate and well-presented. This, therefore, implies that the WebQuests are suitable for use in the teaching of epics in the tertiary level. Hence, these instructional tool developed could address the concern of literature teachers in the teaching of epics. Further, these materials could respond to the issue on the lack of ICT-based instructional materials to be used in instruction.

For an instructional tool, just like WebQuests, to pass the standards of an instructional material in a constructivist perspective, a material developer has to present lesson objectives to students at the beginning of a lesson, employ highly engaging student-centered activities, and use clear and effective instructions. These three considerations in the development of an instructional material greatly spell the success of students in the learning process.

Design Characteristics of the WebQuests

Table 5 shows the results of the evaluation made by the ICT experts on the design characteristics of the WebQuests developed.

The table shows that the developed WebQuests possess excellent introductions, excellent tasks, excellent processes, excellent evaluations and excellent conclusions as indicated by a mean rating of 3.00 for each criterion. This means that the WebQuests developed pass the standards of effective introductions that manifest effective motivation and cognition. Moreover, the tasks, processes, conclusions including the evaluation aspect of the WebQuests are very clear. The cognitive levels of the tasks and processes are excellent. The tasks have connection to the learning objectives and that processes remarkably encourages collaboration. Furthermore, the processes of the WebQuests are very rich and extremely manifest scaffolding. Thus, the introductions, tasks, processes, evaluations and conclusions of the developed WebQuests are valid.

In relation to the aforementioned result, a valid introduction, task, process, evaluation and conclusion of a WebQuest, according to Dodge [2], helps arouse and sustain students' interests. Moreover, it helps students achieve and attain what is expected of them.

As reflected in the table, the experts also evaluated the WebQuests in terms of the resources included or embedded in the process. They indicated that every WebQuest has excellent relevance and quantity of resources as shown by a mean rating of 3.00.

Table 5. Mean ratings of the design characteristics of the WebQuests.

Design Characteristics	Mean Rating	Descriptive Interpretation
A. Introduction		
1. Motivational Effectiveness	3.00	EX
2. Cognitive Effectiveness	3.00	EX
Component Mean	3.00	EX
B. Task		
3. Connection of Task to Learning Objectives	3.00	EX
4. Clarity of Task	3.00	EX
5. Cognitive Level of the Task	3.00	EX
Component Mean	3.00	EX
C. Process		
6. Clarity of Process	3.00	EX
7. Cognitive Level of Process	3.00	EX
8. Collaboration	3.00	EX
9. Richness of Process	3.00	EX
10. Scaffolding of Process	3.00	EX
Component Mean	3.00	EX
D. Resources		
11. Relevance and Quantity of Resources		
12. Quality of Web Resources	3.00	EX
	2.60	EX
Component Mean	2.80	EX
E. Evaluation		
13. Clarity of Evaluation Criteria	3.00	EX
Component Mean	3.00	EX
F. Conclusion		
14. Clearly– stated Conclusion	3.00	EX
Component Mean	3.00	EX
G. Overall Design		
15. Overall Visual Appeal	2.53	EX
16. Mechanical Aspects	2.33	GD
17. Navigation and Flow	2.33	GD
Component Mean	2.40	EX
Overall Mean	**2.89**	**EX**

Legend: EX- Excellent; GD - Good

This means that the WebQuests include relevant and enough resources for students' search for information. Likewise, the experts indicated a mean rating of 2.60 for the WebQuests' excellent quality of web resources. The experts noted that there were few

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broken web links included in the WebQuests and that they suggested the researcher to check by revisiting them. Though, the experts indicated a mean rating of 2.60, they still affirmed that the developed WebQuests have excellent quality of web resources.

The result is in consonance to the claim of Dodge [2] that a successful accomplishment of tasks and learning objectives depends on the high quality and developmentally appropriate and relevant resources included in WebQuests.

It can also be observed from the previous table that the experts evaluated the overall design of each WebQuest. The mean rating of 2.53 indicates an excellent overall visual appeal of the WebQuests. However, the mean rating of 2.33 shows good mechanical aspects and navigation and flow of the WebQuests. This result conforms to the findings of the experts on the WebQuests' resources that some of the links were broken, which affect the direction-finding and continuity of the WebQuests. Thus, they recommended the researcher to go over and check on such problems. Moreover, one expert suggested that the iconsused in the WebQuests should be made more interactive. But overall, still the experts agreed to denote excellent overall design of the WebQuests as indicated by the component mean rating of 2.40. According to March [12], an outstanding overall design of a WebQuest helps maintain and sustain the interests of students to a required task.

Apparently, the overall mean of 2.89 denotes that the WebQuests are excellent in terms of design characteristics. The experts affirmed that the WebQuests are adequate, well-organized and well-presented. One of the experts even commented that the WebQuests support a design that uses time well and motivate and sustain intrinsic appeal to learners. Lastly, they claimed that the developed WebQuests examine instructional strategy in the light of learning theories and points out the need for research in the area of growing interests.

To further improve the WebQuests, the researcher considered the results, the recommendations and the suggestions stipulated by the experts on the WebQuests' design characteristics.

A quality WebQuest depends on the ideas and thought that go into it more than on flashy presentation technologies. It is indeed a challenge to create a one that really works well. Thus, for a WebQuest to be valid, it has to pass several standards to make it a powerful learning tool in the classroom.

CONCLUSION AND RECOMMENDATION

Based on the results of the study, the researcher came up with several conclusions.

The WebQuests developed contain five major parts which include introductions, tasks, processes, evaluations and conclusions. Further, the WebQuests developed are valid in terms of objectives, activities and instructional characteristics. Likewise, these WebQuests are excellent in terms of their introductions, tasks, processes, evaluation and conclusions. As a whole, the WebQuests are valid in terms of content and design characteristics. The materials meet the standards of a WebQuest. Hence, the WebQuests developed are acceptable and can be utilized as instructional materials by literature teachers in the teaching of epics.

With the scope and limitations of the study, the researcher offers several recommendations for future investigation.

Since this study is limited only to content and design characteristics validation of the WebQuests, this study strongly recommends that the WebQuests developed be tried out to students to further determine their effectiveness in the teaching of epics in the tertiary level. This, therefore, implies that an orientation or training be offered and conducted to literature teachers so as to assist them in the use of the WebQuests. This also means that the teachers, later on, have to revisit and enrich their syllabi to integrate the use of WebQuests in their literature classes through the help of curriculum planners.

Also with the aforementioned limitation, this study recommends that other researchers may conduct a more formal and thorough evaluation of the developed WebQuests, whose results can serve as the bases for further revisions later. They could also replicate this study employing cross-sectional, comparative and experimental studies for further study of the different facets of WebQuests.

Since the study concentrates only on developing WebQuests in epics, it also recommended that WebQuests in other literary genres like poetry, essay, short story, drama and novel be made to fully maximize the use of ICT tools in literature classes. This implies that teachers need more support from school administrators, who will encourage them to attend workshops and training related to ICT and developing instructional materials for quality teaching.

Further, the study recommends that a well-

equipped computer laboratory be established in school to fully implement and maximize the benefits of using WebQuests. Without a well-equipped computer laboratory, the implementation of the said instructional tool will be futile.

The study is delimited to developing WebQuests in the teaching of literature, particularly epics. To maximize the result of the study, officials and policy makers in the education sector have to endorse the use of WebQuests not only in the teaching of literature but also in the teaching of and other academic subjects like mathematics and science subjects.

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