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## Developing Constructivist-Webquests Online Materials for TEFL Course

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### Abstract

Considering the results of researchers' observation at some Teaching English as A Foreign Language (TEFL) classes, which noted that there were at least two problems, namely the lack of materials to accommodate the students' need of learning and unavailability of TEFL media to support the learning process, the development of materials for TEFL class are urgently needed. Besides, the high demand for technology integration into language learning to face digital environment motivates education practitioners to develop materials with technology application. WebQuests can be one of meeting points for this intersection. A WebQuests is an online media which allows students to collect and construct information about a subject using a web. By using WebQuests, the students will have an opportunity to actively contribute constructing their own knowledge during the teaching and learning process. Therefore, this study aims at giving rational and theoretical background in developing a web-based material with a constructivist approach, named constructivist-WebQuests.

**Keywords:** material development, constructivist-WebQuests, online materials, TEFL

### A. INTRODUCTION

Teaching English as A Foreign Language (TEFL) is one of the compulsory courses must be taken by students of English Department. At some universities, this course is given separately in two semesters, named TEFL 1 and TEFL 2. Generally, the former will cover the discussion of theories, concepts, knowledge, and basic principles of English teaching and learning. While the latter will give students opportunities to apply all techniques that have been introduced and learned in the previous TEFL course. The students are also required to know more deeply how to teach language skills such as listening, speaking, reading, writing and language components such as vocabulary and grammar. The discussion on how to teach

English across age and proficiency levels is also provided.

Noting the importance of this course content, perceived mastery of the English Education students who will later become English teachers all over the country, is very significant. Failure understanding of prospective teachers will result in a fatal condition of the next generation that is educated.

TEFL courses in English Language Study Program at the Islamic University of Darul 'Ulum, Lamongan, based on observations made by the authors, were still having some problems. The problems can be divided into two issues: those which were experienced by lecturers and those which were experienced by the students who participate in the TEFL courses. Problems experienced by the lecturers, among others: (1) lack of teaching materials, which could accommodate the learning needs of students, (2) lack of TEFL teaching media to support English language learning. While the problems faced by students, among others: (1) lack of specific teaching materials which are able to accommodate the learning needs of students, (2) lack of instructional media, and (3) lack of opportunities for teaching practice. Furthermore, TEFL lecture was generally only held face-to-face in the classroom. If it continuously happens, it is feared that it will lead to saturation of students to learn, which will implicate to at least two bad things: poor quality of the students' teaching skill when participating the Field Practice (PPL) and lack of students' ability to compete in the world of work after graduated from university (low quality of output). Therefore, the development of teaching materials, which could accommodate the learning needs of students, as well as help students, get the materials that support the TEFL course, which at the same time also accommodate the creativity of students, reduce the boredom of monotonous teaching techniques, and assist them to obtain the latest information for teaching the English language, is necessary.

Teaching materials are one of the important factors to improve the quality of learning and the ability of learners. Not only to improve the ability in general, in the form of learners' outcomes (Clement et al, 2014) and learners' cognitive competence (Nwike & Catherine, 2013), but also their level of thinking skills, from low level thinking skills, such as reading and understanding (Eskey & Grabe , 1986); medium-level thinking skills, such as representations (Mahardika, 2011) and communication skills (Ramdani, 2012; Sutardi, 2010); until the higher order thinking skills, such as reasoning skills, ability to connect (Ramdani, 2012), problem solving, scientific thinking (Sutardi, 2010), critical thinking and creative thinking (Pangesti, 2012).

The utilization of online materials by using WebQuests is believed to be able to overcome the above problems since the application of WebQuests will encourage students learning to use technology out of common face to face learning. It will also train the students to find and get the latest directed information outside of class. WebQuests often regarded as a strategy to train the students' higher-order thinking skills. This is demonstrated by the participation of students in WebQuests-implemented activities which was noted higher compare to other activities (Alshumaimeri & Almasri, 2012). The increasing level of collaboration between students is believed to be the factors that cause. Additionally, Molebash et. al. (2002) concluded that the level of inquiry in learning with the application of WebQuests can directly affect the students' level of thinking, too. Tsai (2006) who investigated the effect of the implementation of WebQuests in a program of *English as a Foreign Language* (EFL) noted that students who receive instruction using WebQuests can master vocabulary and reading stories in English better than those without WebQuests implementation. This is similar to the findings obtained by Suraya (2011) in which WebQuests was effectively used as a medium to improve the students' ability in writing descriptive text. Regarding the study to develop WebQuests-based online material, Alias, DeWitt, and Siraj (2013) conducted a research which aimed at designing and developing a web-based teaching courseware, WebQuest, for secondary school Physics module and to test the effectiveness of the module. The results showed that the WebQuest was successfully implemented and the module was effective for learners.

The use of technology outside the classroom will also guide students to actively utilize their free time. In a class that implements the constructivist approach, the technology is available as a tool for students to process the information in accordance with what they understand (mental processes), share information and to cooperate and interact with other students and lecturer. With constructive approach using focus groups and these WebQuests, students will be expected to actively contribute to learning, developing thinking skills and acquiring better learning outcomes.

Moreover, the online product produced in the development of these materials has special characteristics or features, namely: (1) safe from loss and damage, (2) prepare the students to read the material earlier, (3) can be added and subtracted at any time as needed (4) is designed to guide students to learn independently or in groups for their individual or group tasks, (5) is designed to provide a wide range of links that will direct students to obtain relevant information, so students will not spend long hours without any significant results, (6) in terms of language learning, surfing articles on the web, skimming the website addresses, scanning

documents to obtain appropriate information and trying to understand the contents of the article quickly will be very good for language skills improvements, (7) give opportunities for students to interact with authentic materials, even if there is material that is poorly understood, students can directly ask the author via e-mail (8) provide various relevant links that are free to choose to be explored and developed (9) unlimited time and place access, and (10) downloadable by anyone, anytime and anywhere.

Additionally, based on observations made by the authors, another problem that is also faced by students of English Education at Islamic University of Darul Ulum Lamongan in TEFL course is monotonous and teacher-centered teaching method which would potentially result in passive and less participated students to learning. Therefore, the development of WebQuests-based online instructional materials proposed here will use constructivist approach. With the constructivist approach, students will be facilitated to actively think and be creative in order to develop the ability to think. The basic concept of constructivist learning is that new knowledge is actively constructed by the learner based on previously obtained knowledge. Therefore, it can be said that the learning of constructivism is a learning technique that involves the students to actively foster knowledge by using the knowledge that students had before.

Based on the background above, it is necessary to develop Webquest-based teaching materials with the constructivist approach.

## **B. BODY**

### **1. Characteristics of Online Instructional Materials Based WebQuests**

#### ***a. WebQuests Definitions***

In line with the increasing number of students who access the Internet, the demand for teachers to help students take advantage of this valuable resource as a medium for effective learning is also raising. WebQuests is one of the online media that can be used to assist. WebQuests is a web page designed by professors containing a package of various materials, activities, and tasks to be accessed and worked on by students during the teaching and learning process. WebQuests concept was first developed by Dodge (2006) from San Diego State University. According to him, WebQuests are inquiry-oriented activity in which some or all of the information comes from the Internet. This definition is then developed, one of which states that WebQuests is a learning with the constructivist approach where students not only collect and organize the information found on the internet, but they also orient their activities to the

specific objectives assigned, generally associated with one or more roles in certain professions. Typically, WebQuests consists of several components, namely: introduction, task, process, learning resources, teaching suggestions, and conclusions (Vacca, 2009).

### ***b. WebQuests Components***

According to the initial model, WebQuests consists of six components, namely the introduction, assignments, processes, learning resources, evaluation and conclusion, which guide students in learning. The component may be renamed or reorganized in accordance with the needs of the students. Components of WebQuests proposed here are:

#### 1. Title

#### 2. Introduction

This page contains the introduction of the whole topic of WebQuests, including background information, or the vocabulary and basic concepts that should be understood by the students to be able to complete the task in WebQuests.

#### 3. Task

This page will explain in detail what students must complete through WebQuests. Given task is expected to motivate and attract students, as well as the real-life oriented.

#### 4. Process

This page contains step-by-step activity to complete the task. Each step must be described clearly so that students understand what should be done to fulfill the task.

#### 5. Sources

This page is designed to guide students learn topics/material being discussed and to complete the tasks assigned through various links containing the learning resources. The links will direct the students to obtain relevant and important information from the Internet. With the provided links, the possibility of irrelevant browsing will be minimized. However, students will still be given freedom to seek from other sources to expand the information, only after all the suggested links accessed.

#### 6. Evaluation

This page describes the criteria for scoring. On this page, students can also do a self-evaluation and reflection on what has been done and achieved. Lecturers can also provide an evaluation at this stage.

#### 7. Conclusion

This page contains closing statements to review the materials and students activities.

Figure 1 shows the main page of WebQuest designed by Zunal.com. Beside the seven components mentioned, WebQuests designed by Zunal.com also provides additional links for a module, quiz, and frequently asked questions (see figure 2). These links may give extra room for lecturers to make their WebQuests more interactive and qualified.



Figure 1. Main Page of WebQuest designed by Zunal.com

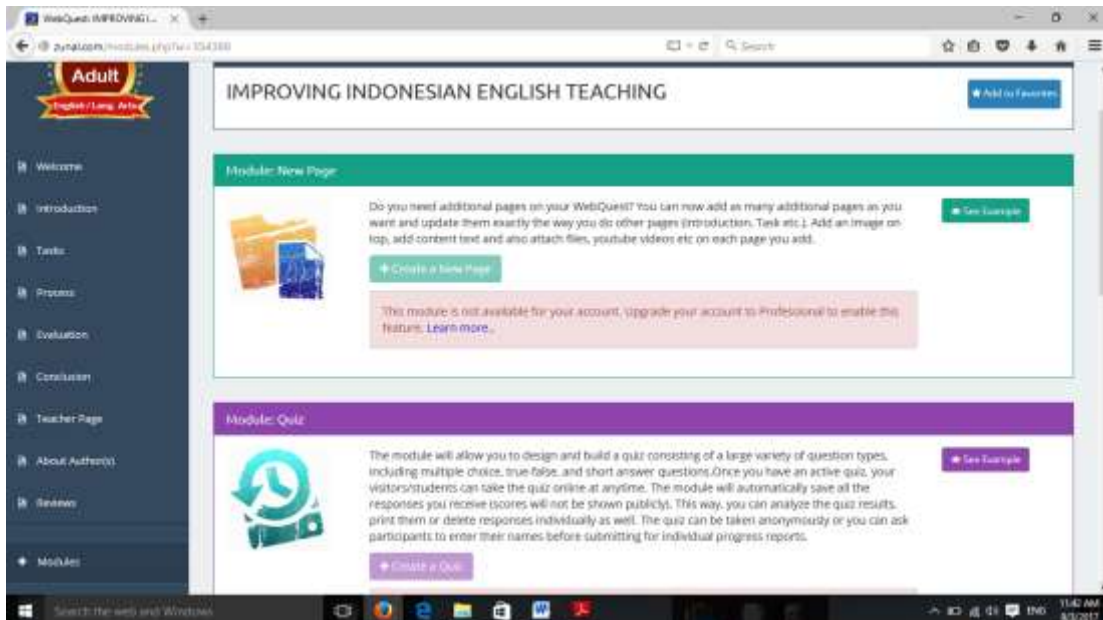


Figure 2. Additional Pages for WebQuest by Zunal.com

### *c. Advantages of WebQuests Usage*

The use of WebQuests in learning provides several benefits such as:

1. WebQuests allows lecturers to design an integrated task between one topic to another topic. For language learning, WebQuests enable teachers to integrate teaching the four *skills* (reading, listening, speaking, and writing) in one topic and assignment activities. By doing so, students will not have to face a variety of tasks that stand on their own. Moreover, currently, it is recommended that the learning of language should be skills-integrated (at least two skills integrated) because, in real life, those skills will be used simultaneously in communication (Brown, 2007).
2. WebQuests will train students to think critically as to be able to write (complete assignments), the students must be able to think with a higher level of cognition in order to analyze, synthesize, classify and evaluate each learning resources (online resources/links) have been accessed.
3. WebQuests can also motivate students and give students authentic assignments, which direct them to realize that what they do is "real" and "useful". It will indirectly require them to try harder, concentrate longer, and determined to complete the task well and perfect.
4. WebQuests also stimulate the implementation of cooperative learning and constructive for WebQuests tasks are generally complex or a controversial subject, which should be done by a group discussion (Wang & Hannafin, 2008).

## **2. WebQuests and Constructivist Approach**

Among a variety of technology-based learning media out there, WebQuests emerged as one of the tools that are suitable to support the principles of constructivism approach in language learning (Zlatkovska, 2010). March (2008) says that WebQuests is one way to integrate a variety of learning strategies, one of which is constructivism.

WebQuests encourage student-centered learning with lecturers' role as facilitators during the learning process. This is in line with Golwin-Jones (2004) who found that WebQuests can help fostering cooperative learning through focus groups. Activities in WebQuests are usually done in groups with the production of a report as the ultimate goal after collecting, summarizing, and synthesizing information obtained. These activities provide opportunities for students to engage in constructive activities that require them to share the experience through the use of language oriented discovery and information or data search skills via the Web.

There has been some research that noted the successful implementation of WebQuests in

general learning (Vidoni and Maddux, 2003, MacGregor & Lou, 2006, Ikpeze & Boyd, 2007, Manning & Carpenter, 2008). However, the article focused on the application as well as the development of WebQuests for teaching *English as a Foreign Language* (EFL) is still very limited (Prapinwong, 2008; Alias, DeWitt, and Siraj, 2013). Therefore, the development of WebQuests-based teaching materials which support the constructivist approach to facilitate the TEFL class is important.

### 3. Current Research Novelty and Theoretical Framework

Cuhadar & Kuzu (2010), based on their research findings, suggest that instruction which is planned with constructivist principles and implemented through a blog can improve learning and social interaction. Williams and Jacobs (2004), based on the analysis of qualitative and quantitative data, note that the use of blogs is effective in improving teaching and learning outcomes of students.

The novelty of this development study is the combination of constructivist learning concept and use of *WebQuests* in the development of online teaching materials for TEFL course. Overall, the novelty and the position of the issues examined are presented in Figure 3.

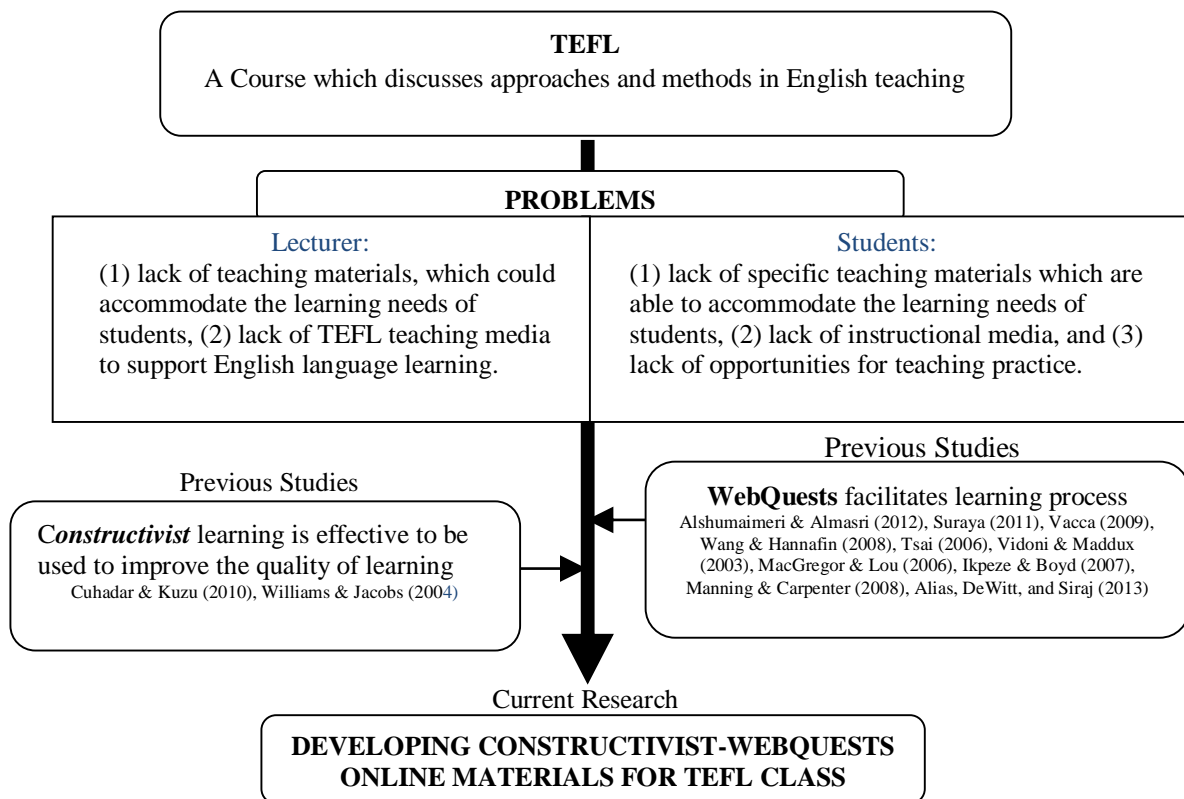


Figure 3. Current Research Novelty and Theoretical Framework



#### 4. Method

This study will use the 4-D model by Thiagarajan (1974), which consists of four stages, namely: (1) define, (2) design, (3) develop, and (4) disseminate. Figure 4 shows in detail each step activities.

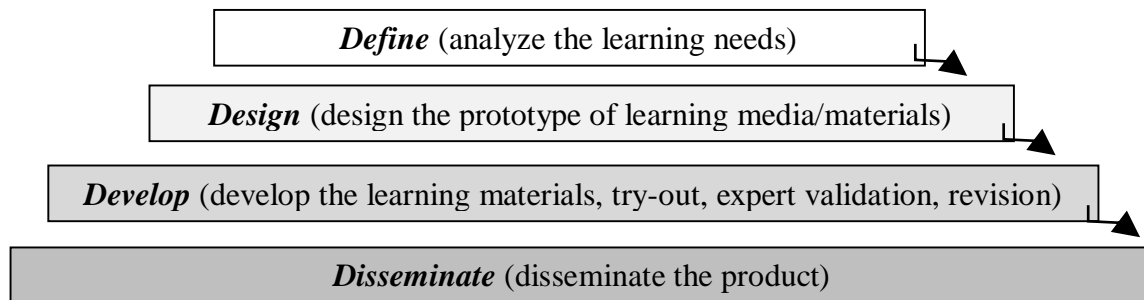


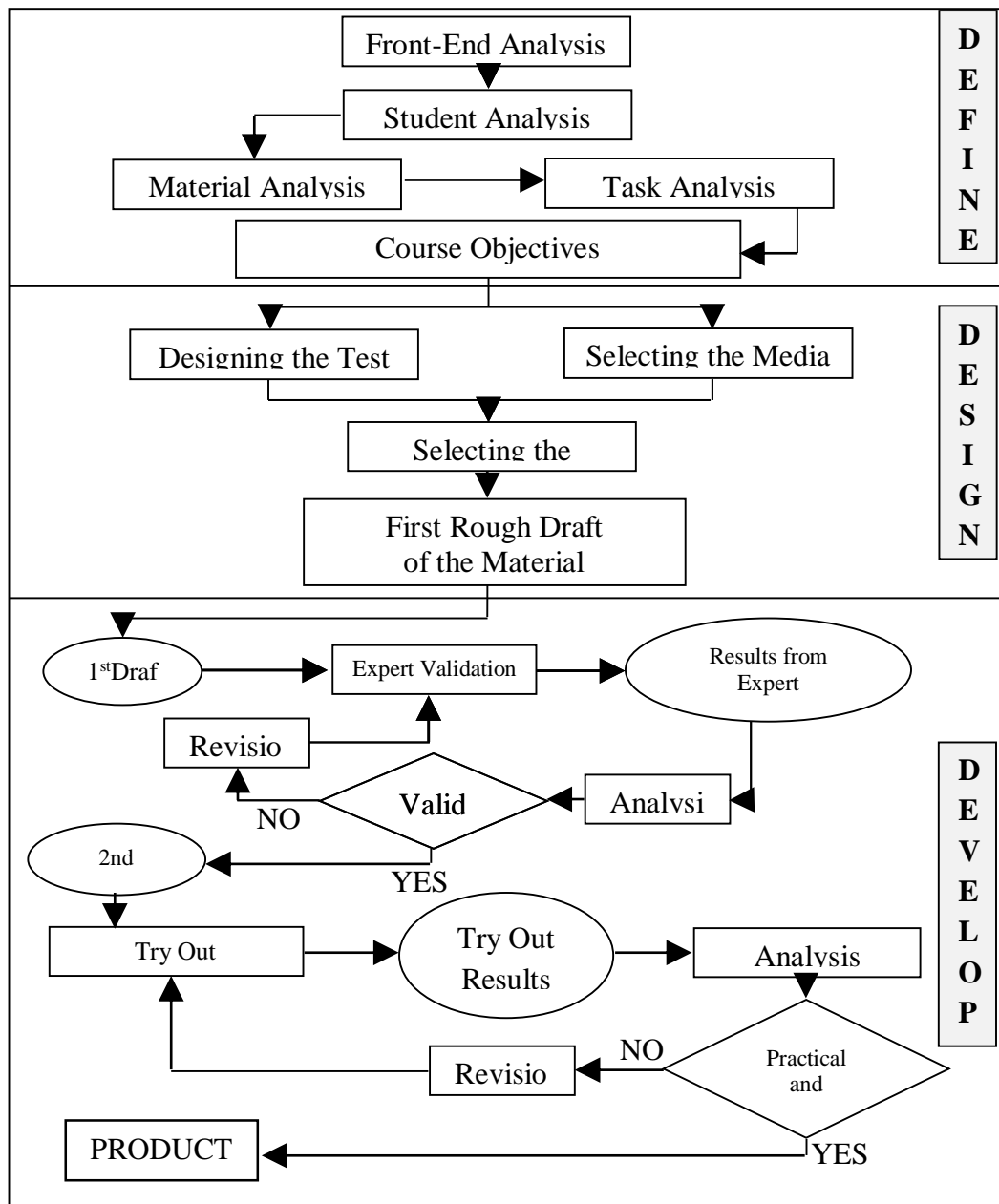
Figure 4. Four-D Model

#### 5. Study Design

The flow of material development of this study could be seen in Figure 5.

#### C. CONCLUSION

Studies have shown the advantage of WebQuests utilization in various learning courses, yet the development of material by using this online media for TEFL class is still very few. Thus, designing and developing WebQuests-based online materials for TEFL class is seen necessary in order to provide materials to accommodate the students' need of learning and media to support the learning process in the current digital era.



**Descriptions:**

→ : Actions

○ : Results

□ : Activities

◇ : Decisions

Figure 5. Study Design

## References

- Alias, N., DeWitt D., and Siraj S. (2013). Design and development of WebQuest for Physics Module by employing Isman Instructional Design Model. *Procedia - Social and Behavioral Sciences*, 103, 273 – 280
- Alshumaimeri, Y.A. & Almasri, M.M. 2012. The Effects of Using WebQuests on Reading Comprehension Performance of Saudi EFL Students. *TOJET: The Turkish Online Journal of Educational Technology*. 11(4): 295-306.
- Brown, H. D. 2007. *Teaching by Principles: An Interactive Approach to Language Pedagogy*. New York: Pearson Education.
- Clement, Iji O., Ogbole Patience O., & Uka Nanna K. 2014. Effect of Improvised Instructional Materials on Students' Achievement in Geometry at the Upper Basic Education Level in Makurdi Metropolis, Benue State, Nigeria. *American Journal of Educational Research*. 2(7): 538-542.
- Cuhadar & Kuzu. 2010. Improving Interaction through Blogs in A Constructivist Learning Environment. *Turkish Online Journal of Distance Education-TOJDE*. 11(1): 134-161.
- Dodge, B. 2006. *WebQuests: Past, Present and Future*. San Diego State University. USA.
- Eskey, D.E., & Grabe, W. 1986. *Teaching Second Language: Reading for Academic Purposes*. Addison: Wesley Publishing Co.
- Golwin-Jones, B. 2004. Emerging Technologies Language in Action: From WebQuests to Virtual Realities. *Language Learning & Technology*. 8(3): 9-14.
- Ikpeze, C.H., and B.F. Boyd. 2007. Web-based inquiry learning: facilitating thoughtful literacy with WebQuests. *The Reading Teacher*. 60(7): 644-654.
- March, T. 2008. Revisiting WebQuests in a Web 2 world: How developments in technology and pedagogy combine to scaffold personal learning. *Interactive Educational Multimedia*, 15: 1-17.
- MacGregor, K.S., and Y. Lou. 2006. Web-based learning: how task scaffolding and web site design support knowledge acquisition. *Journal of Research on Technology in Education*. 37(2): 161-175.
- Mahardika, I. M. 2011. Pengembangan Bahan Ajar Mekanika untuk Meningkatkan Kemampuan Representasi Verbal, Matematis, Gambar, dan Grafik Mahasiswa Calon Guru Fisika. *Disertasi*. Universitas Pendidikan Indonesia. Bandung.
- Manning, J.B. and L.B. Carpenter. 2008. Assistive technology WebQuests: improving learning for preservice teachers. *TechTrend*. 52(6): 47-52.

- Molebash, P.E. 2002. Constructivism Meets Technology Integration: The CUFA Technology Guideline in an Elementary Social Student Methods Course. *Theory and Research in Social Education*. 30(3): 429-455.
- Nwike, Matthew C., & Catherine, O. 2013. Effects of Use of Instructional Materials on Students Cognitive Achievement in Agricultural Science. *Journal of Educational and Social Research*. 3(5): 1-9.
- Pangesti, F. 2012. Pengembangan Bahan Ajar Pendidikan Berpikir (Kritis dan Kreatif) Berbahasa Indonesia SMA Melalui Pembelajaran Lintas Mata Pelajaran. *Jurnal Online Universitas Negeri Malang*. DOI: <http://jurnal-online.um.ac.id/data/artikel/artikel285C26E2B1E88FF769234C6254865E8A.pdf>
- Prapinwong, M. 2008. Constructivist language learning through WebQuests in EFL context: an exploratory study. *Doctoral Dissertation*. Indiana University.
- Ramdani, Y. 2012. Pengembangan Instrumen dan Bahan Ajar Untuk Meningkatkan Kemampuan Komunikasi, Penalaran, dan Koneksi Matematis Dalam Konsep Integral. *Jurnal Penelitian Pendidikan*. 13(1): 39-48.
- Suraya, F. 2011. The Use of WebQuests As A Media To Improve Students' Skill In Writing Descriptive Text. *Skripsi*. Pendidikan Bahasa Inggris Universitas Negeri Semarang, Semarang.
- Sutardi. 2010. Pengembangan Bahan Ajar Fisika SMA Berbasis Spreadsheet Untuk Meningkatkan Kemampuan Siswa Berkomunikasi Ilmiah. *Prosiding Pertemuan Ilmiah XXIV HFI Jateng & DIY*, 10 April 2010. Semarang. Hal. 168-179.
- Thiagarajan, S., D. S. Semmel, and M. I. Semmel. 1974. *Instructional Development for Training Teachers of Exceptional Children, A Source Book*. Indiana University. Bloomington.
- Tsai, S. H. 2006. Integrating WebQuests learning into EFL instruction. *Proceedings of the 2006 Society for Information Technology and Teacher Education Conference*. Hal. 2061-2067.
- Vacca, R.T., & Jo Anne L. Vacca. 2009. *Content Are Reading: Literacy Learning Across the Curriculum*. Pearson. New York.
- Vidoni, K., & Maddux, C. 2002. WebQuests: Can They Be Used to Improve Critical Thinking Skills in Students? *The Haworth Press*. 19(1/2): 101-117.
- Wang, F. & Hannafin, M. J. 2008. Integrating WebQuests in preservice teacher education. *Educational Media International*. 45(1): 59-73.
- Williams, J.B. & Jacobs, J. 2004. Exploring the use of blogs as learning spaces in the higher education sector. *Australasian Journal of Educational Technology*. 20(2): 232-247.

Zlatkovska, E. 2010. WebQuests as a Constructivist Tool in the EFL Teaching Methodology Class in a University in Macedonia. *CORELL: Computer Resources for Language Learning*. 3, 14-24.