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Theoretical and Methodological Review of Web-based Instruction for English Language Teachers

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Abstract

This article aims to provide an extensive review of web-based instruction (WBI), implemented within the realm of English language teaching (ELT). WBI is a teaching method that utilizes computer technology to promote learning experiences by leveraging the internet and web applications. It is suggested that educators carefully consider the related elements of age, affiliation, internet access, technological skills, educational needs, culture, interests, motivation and expectation when implementing WBI. In order for this model to be successfully implemented, educators can adhere to the following seven stages of the WBI framework: construct and objective identification, prior knowledge testing, learning objectives modification, learning experiences development, assessment methods identification, learning experiences evaluation, and learning outcomes reflection. Implementing WBI yields many benefits

that traditional classroom teaching lacks. These include distance learning capability, convenient virtual interactive learning features, reduction of time constraints, and elimination of cultural and personality type obstacles. When evaluating the effectiveness of WBI, either the formative or the summative technique may be used. This article also provides detailed insights into WBI implementation that educators can adopt to promote more effective language instruction than what traditional classroom teaching offers.

Keywords: web-based instruction, internet technology, ELT

Introduction

The development of internet technology has resulted in changes in many fields, such as communication, social development, economy, and education. These four fields are interrelated at the global scale. Social media platforms, for example, were born out of the internet, and they have led to globally exchanged communication and worldwide social development that then created a new global economy. This new world economic order has created strong demand for English education throughout the world, as English is considered the most commonly used language for global communication. As related to the field of English language teaching (ELT), a number of instructors teaching English are now interested in implementing internet technology into their teaching. To further elaborate, according to Means (2014), teachers in most U.S. institutions are now providing online courses and rates of enrollment are growing fairly rapidly. Despite the fact that there are many favorable teaching models, for instance, blended learning, hybrid learning and flipped classrooms, one of the popular models is web-based instruction (WBI). WBI has received special attention amongst teachers due to the benefits this teaching model offers. This article

will first define the term 'web-based instruction'. Significant elements of WBI will then be explained in detail. The article also elaborates that the web-based instruction method resembles a pattern, consisting of nine actions while also providing the potential benefits of WBI. Additionally, the article explains the applicable framework for WBI as well as the evaluation techniques that are appropriate for WBI implementation.

Definitions of Web-based Instruction

Within the realm of WBI, Khan (1997) defines the term as electronic learning or simply an e-learning website or program that can be made widely available anywhere in the world, as it takes the advantage of internet technology. The author further explains that the e-learning program is a software application that is developed based on carefully defined strategies that must include a collection of skills. The program can be used to cognitively instruct learners in an environment that promotes collaboration between the teacher and learners, amongst learning peers, or even amongst all parties.

Similarly, Davidson and Rasmussen (2006) assert that WBI is a training program that is designed and customized to meet the specific learning needs of learners, by delivering the content online either on the World Wide Web or within an organization's private network – also known as the intranet. Regardless of whether the online content is made available to the public or within an organization, WBI can provide a learning environment where the instructor can promote learning experience, which is not only meaningful but also authentic to online learners. It can be said that WBI refers to the teaching technique that implements the use of the internet in the teaching context, in order to create a meaningful and authentic learning environment in which the teacher manages, implements and fosters all learning activities.

Elements of Web-based Instruction

In order for the implementation to be successful, Dupuis (2003) encourages teachers to take the following key elements into

consideration: age, affiliation, internet access, technological skills, educational needs, culture, interests, motivation and expectations. All elements are described in detail below.

1. Age

Depending on whether the learners are children, teenagers, adults or seniors, each age group has a different experience with online content. Younger contemporary audiences most likely have been accustomed to learning on computers throughout most of their educational life, while older audiences may be less likely to have interacted with online instruction environments. Age levels directly affect the type of information, sophistication of language and content varieties. It can also strongly influence popular cultural references that the instructor can expect the audience to understand in the provided content.

Therefore, teachers and educators have to be concerned about this issue when designing any online courses. Since it appears that younger audiences nowadays are quick to search and gain plenty of information which they may consider as new knowledge, but they might be unable to discern the differences between fact and opinion, or determine which source of information is reliable. If they are not critical enough, they could be a gullible person or a passive learner that only pick up any information that can be easily accessed.

2. Affiliation

If the audience is affiliated with the same school, organization or geographical area, it may be easier to tailor content that addresses the uniqueness of that institution or region. Commonalities in affiliation can lead to the development of appropriate content for the project.

3. Internet access

Today, access to a computer with an internet connection is increasingly commonplace. However, if audiences live in an economically disadvantaged or remote area, their internet access

may be limited. Availability of access to the web determines the amount of time that the instructor needs to place on students' assignments. For instance, some people may need to access the internet by using computers at a public or a school library, while others can simply stay within the comfort of their own homes to go online.

However, even those with internet access at home may be limited to slow dial up connections. Because of different internet access and bandwidth, the content for each audience group may have to be customized in such a way that the website design, graphics and interactivity features in the instruction are appropriate for the target audience.

4. Technological skills

The internet has a wide variety of uses, ranging from communication and social interaction to information gathering and research. Each type of these uses may require different technological skills. For example, frequent users of chat programs may prefer using a chat module for their online instructions. Students who are experienced with distance education courses may be able to navigate web-based instructions with ease, while novice internet users may have a high learning curve to grasp the concept of online instructions and navigate through the web-based instructional environment. Additionally, some of them may require human assistance.

5. Educational needs

When considering educational needs, the teacher may also want to understand both the students' academic objectives and their learning styles. The understanding of these aspects can help the teacher determine appropriate online instruction programs and delivery methods suitable for the learners' needs. Moreover, it can help ensure that learners succeed in their educational endeavors.

6. Culture

The target learners' nationality and the culture are critical factors that must be understood in WBI. Testing the website on a few representatives of the culture alleviates many potential problems resulting from cultural misunderstanding. For example, although the audience's primary language is English, it is easy to lose an international user's interest without intention, or it could even offend them through seemingly ignorant cultural references. It is, therefore, necessary to be mindful of the culture of the target audience when designing, developing and delivering WBI.

7. Interests

In any audience group, there can be a wide range of interests amongst students. However, in a larger group of students and a group more similar in age and background, the more likely the teacher will find shared interests amongst them. In contrast, in a smaller group of students or in a group with greater diversity in age and background, the less likely the teacher will find shared interests amongst them. With these facts in mind, strategically, the teacher needs to avoid content that audiences are not interested in and focus on delivering content they find interesting.

8. Motivation

Understanding what motivates the target audience to learn helps the instructor design WBI that can help students achieve their immediate studying needs. For example, if the instructor can link the online instruction project to an existing course that will help students complete their assignments faster, it can strongly motivate students to participate in the project. Other factors may also help increase the individual's learning motivation. For instance, if the online instruction can provide a clear economic impact, such as securing a new job or streamlining a business process, students may want to invest their time and effort in the learning process.

9. Expectations

If students have prior experience with the online instruction, they are likely to have developed preferences and expectations for this type of learning. However, for students that lack prior experience with web-based teaching, they may be uncertain of what to expect. In the latter case, the instructor may need to develop a supportive learning environment to help familiarize them with the new learning environment.

Web-based Instruction Methodological Framework

When it comes to a real teaching context, some teachers may have an unclear picture of how to teach a subject through WBI. However, in 1993, Laurillard constructed a design process for the web-based learning approach, consisting of eight actions. These actions are described in order, as follows:

1. The teacher should identify the core capabilities that target students must learn and improve upon by consulting appropriate curricular planning materials from national, state-level or provincial-level and local institutions.

2. It is suggested that the teacher simulates learning outcomes and tests them on target students through the use of interviews, quizzes, pre-tests, and other methods to learn about students' schema knowledge.

3. The teacher then modifies the goals and objectives, either by omitting, adding or rewriting them, based on the results of the pre-instruction process that reveal the target students' specific knowledge and misconceptions.

4. The next step is to develop learning experiences that provide students with opportunities to attain the understandings identified in step three above. After that, the learning objectives should be explicitly articulated or identified for the students. Then, teachers implement the teaching model in class.

5. The fifth step deals with the teacher's identification of assessment methods. The purpose is to determine students' understanding and to specify the criteria to determine whether such understanding has been achieved.

6. In the sixth step, the teacher collects and consolidates critiques and opinions about WBI by implementing regular discussion panels amongst learners and between the teacher and learners, in order to evaluate the success of the learning experience.

7. After that, the teacher adjusts or even customizes learning objectives to assist students in meeting their desired learning outcomes, from the beginning to the end of the learning process.

8. The last step is when the teacher imposes a mandate whereby students monitor their learning experiences and become aware of their learning progress at all times so that they can reflect upon whether they have achieved their learning outcomes.

Web-based Instruction Methodological Framework

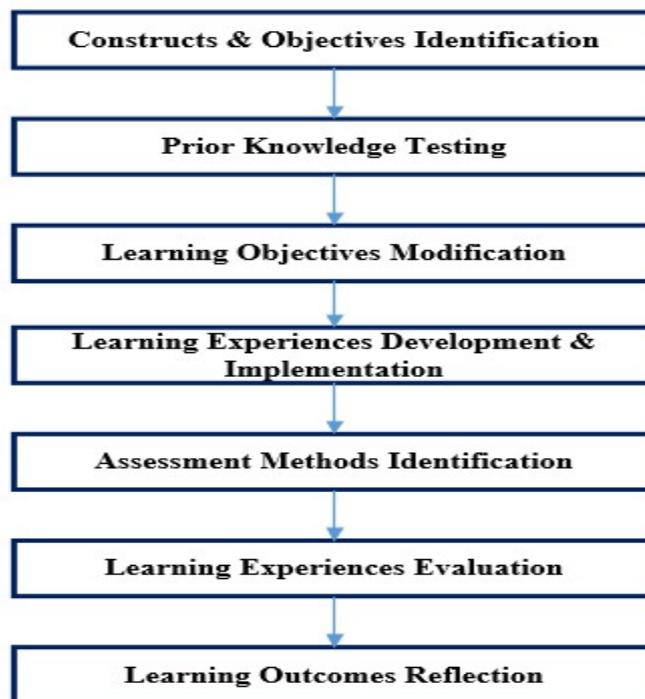


Figure 1: Web-based Instruction Methodological Framework
Adapted from Laurillard (1993)

Benefits of Web-based Instruction Implementation

Implementing WBI can be potentially beneficial in many ways. Dupuis (2003) notes that there can be a wide range of reasons for one to undertake WBI. The author provides five substantial reasons that may attract the prospective learner. These reasons are further elaborated as follows:

1. Impart new knowledge or skills

It is evident that most educational institutions and public organizations focus on the importance of ensuring that people of all ages develop the necessary skills to seek, evaluate, manage, and create information. If the course designer determines that members of the target audience such as students, staff, instructors, patrons, researchers or clients may benefit from instruction in a particular topic in their leisure time, WBI can be a meaningful addition to existing educational offerings. Strong evidence for this is, for example, an English for work course on a web-based instruction platform. If the instruction provides a clear economic impact such as securing a new job or streamlining a business process, learners will likely be keener to invest the necessary time and effort in acquiring the English skills. Therefore, apart from gaining technological skills, students also gain other knowledge or skills at the same time.

2. Maximize limited resources

Good instruction requires careful thinking and often a significant commitment from the instructor, resulting in much effort being spent in terms of time management and energy consumption on their part. Although this may also be true for quality online instruction, by using WBI the instructor can reach a large number of the target audience while using less time and effort. Additionally, WBI can be delivered without any concerns regarding to limitations of classroom space. Using this instructional model, the instructor can ensure that all audience members are introduced to the same content online and that allows them to seek additional assistance only when necessary.

Take, for example, English for communication courses taught at almost all institutions, with high enrollment rates, students often cannot enroll in the section they wish to take. The web-based instruction model can help mitigate this issue, as it maximizes the use of limited resources.

3. Support distance learning initiatives

There are many universities that offer significant distance or distributed learning courses. These courses are offered through classroom instructions available remotely, by delivering them in the form of online instructions. If such initiatives are already underway on their campuses, lecturers have good reasons to launch WBI projects designed to complement these programs. However, if distance learning initiatives are not yet substantial for their institutions, Dupuis (2003) suggests that lecturers may consider taking the lead in this area by making online instructions available on their own or in partnerships with other interested agencies. When students want to enroll in some specific courses at some particular universities overseas but are unable to secure funding for overseas studies, for example, WBI can come into play since it supports distance learning.

4. Transform connections with curriculum

Some educational institutions have information literacy requirements built into their curriculum. In this case, WBI may offer a solution that provides consistent and meaningful instruction to a number of courses that cater to similar audiences or teach similar topics. In the absence of these initiatives, there may be opportunities for any traditional partnership such as those among school teachers, faculty members, training coordinators or community organizational leaders – to integrate instruction, research skills and even the use of specific resources together. They can then develop these elements into online components or modules. The development of web-based alternatives with these partners may encourage them to rethink and even redesign the instruction or training programs they currently offer. For instance,

when there are almost twenty subjects launched in the business English curriculum in a particular semester at a given university, instead of individually managing each subject, the use of WBI offers the curriculum users the ability to manage all subjects for a more comprehensive and collaborative curriculum.

5. Encourage independent learning

Independent learning can be encouraged for people with certain characteristics. For example, busy individuals who want to learn something quickly from the internet and who are also regular users of web technology, WBI can cater to their demands and interests. In another instance, some people may prefer an on-demand learning model, especially in cases where the content can easily be addressed online, with integrated user-interactive features. In this example, teachers can personalize the contents or assignments. Teachers can add a “more to learn” section for students in addition to all the required course works so that they can become autonomous learners.

Smith (2006) further elaborates that implementing web-based instruction can be beneficial in several ways. She mentions that with WBI, teachers can teach a large number of students a variety of skills. Moreover, WBI can be interactive since teachers can provide immediate feedback to students while they are working on assignments. Another benefit is that WBI offers less time constraints than traditional classroom teaching methods. Because this model is independent of physical space limitations, everybody can access learning materials any time they need, as long as they have internet access. In addition, WBI helps increase the value of teaching validity and reliability, as the same content is presented similarly to all learners. As a result, problems relating to the teacher’s inability to deliver instruction consistently can be reduced and even eliminated in some cases.

Web-based Instruction Evaluation

Davidson & Rasmussen (2006) suggest that when evaluating the effectiveness of WBI, either formative or summative

techniques may be implemented. When the formative evaluation approach is deployed, the content of the online instruction is evaluated during the design and development phase, by using the formative evaluation method or combinations of methods appropriate for program design and its content. By doing so, the WBI program developer has the opportunities to review constructive feedback and improve the overall program effectiveness of both the design and content of the online instruction, prior to delivering it to their target learners. In contrast to using the formative approach, the summative approach of the assessment technique is implemented in order to assess the efficiency and effectiveness of WBI after it has been delivered to target learners. The feedback can then be reviewed as to how well the instruction is received by learners, as well as how much they perceive its value. Based on such feedback, the instructor of the web-based learning program can appropriately improve the program's effectiveness.

Conclusion

In summary, this article describes web-based instruction (WBI) as a way to provide education to learners by leveraging the availability of internet technology so that learners can access online courses from anywhere globally. As a result, English educators around the world can use this model to help learners improve their English skills and ready themselves to meet the demands of the new world economic order arising from the influence of technology. When undertaking WBI, one must carefully consider all of its important elements as mentioned previously. In addition, the article further elaborates that the WBI method is a learning process comprising eight relevant actions while also providing convincing reasons that teachers and learners may find WBI beneficial, as well as providing possible assessment techniques.

Despite the fact that results from related research reveal that this teaching model can successfully assist students in learning English (Belz, 2007; Ishihara, 2007; More & Ukoha,

2009; Dowling, 2011; Yusof & Saadon, 2011), this model also has some disadvantages. It appears that this model requires students to be independent in their learning. As a consequence, students with low self-motivation may fall behind. Another potential problem involves the use of technology. For WBI to be successfully implemented, a stable internet connection is needed. Furthermore, students who are novice computer users may have difficulties in learning in an online environment. Therefore, the course designer must carefully develop WBI in such a way that these potential problems are effectively mitigated.

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