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## A new trend in teacher education: A web-enhanced methodology course

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### Abstract

Recent technological developments lead the widespread use of Web-enhanced technologies at higher education institutions. Despite enthusiasm about the Web-enhanced instruction in different disciplines, the potential of such instruction for teacher education and teacher professional development, particularly its effects on the pre-service teachers have not been explored in detail. Thus, the aim of this study is to evaluate the effectiveness and efficiency of web component of a methodology course in terms of Turkish ELT pre-service teachers' perspectives. In the study, a face-to-face originated methodology course for pre-service ELT teachers was redesigned so as to provide an interactive, instructor-guided Web-enhanced course along with student-centered face-to-face instruction. This course was supported with an online learning platform for information and material exchange, which was provided by campus licensed WebCT (Blackboard) program. To determine the efficiency of this blended course, the perspectives of 25 students attending to this course were examined through a survey questioning pedagogical, communicative, technical and affective aspects of web-component. After the descriptive analyses on the collected data, it was seen that majority of the students had positive attitude towards the technology use, particularly web-component in the course. They defined this component as an aid in their learning and they agreed that such applications are useful for their teacher development. Based on the findings, it can be concluded that the students found the web-component as effective and they particularly appreciated its efficacy for methodology courses, where their teaching skills are to be developed.

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### I. Introduction

Recent technological developments lead the widespread use of Web-enhanced technologies at higher education institutions owing to its advantages such as convenience, speed of communication, rapid and

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remote access to information, instant feedback, and cost saving (Iman et al. 2006; Madeen. Ford, Miller & Levy, 2005). Along with the considerable interest on this new technological trend on education, various studies have been conducted on the use of Web-enhanced technologies at different educational contexts. As most of these studies have commonly concluded that there is no much significant difference between face-to face and distance education in terms of learning, academic achievement, and satisfaction (Barry & Runyan, 1995; Schulman & Sims, 1999; Gagne & Shepherd, 2001; Hiltz, Zhang & Turoff, 2002; Russell, 1999; 2001) the integration of Web components into teaching and learning environments has increased, hence education becomes on the verge of transition into broad use of Web-enhanced learning resources eluding the time and place boundaries in class.

The initiatives to offer better learning environments has undergone a shift away from traditional learning towards more flexible and more student-centered learning environments which provides a freedom for the learners in terms of time and place of the learning environments. In the context of such initiatives, higher education institutions started increasingly making use of information technologies, Internet and Web based technologies through implementing some of these technologies successfully. Thus far, different ways to integrate online/Web component into instruction have been suggested such as Web-based, blended, and Web-enhanced classrooms. The definitions of Web-based or blended instruction in the literature highlights intensive Web or Internet oriented course designs, where the course was organized as combination of face-to-face and online instructional designs. Likewise, Web-enhanced classrooms are defined as powerful environments for eliciting reflective and collaborative learning by supporting pedagogical innovation and offering opportunities to improve practice (Lafferriere et al, 2006).

Jonassen (1999) proposed a constructivist design model for Web-enhanced learning and teaching environments as focusing on knowledge construction, presenting authentic tasks, providing a real-world like learning environment, fostering reflective practicing, supporting collaborative learning through social negotiation. In this regard. Mason (1998) and Gulati (2004) supported the idea that constructivist approach could be encouraged in Web-enhanced learning environments through learner participation in structured online discussions, collaborative online activities, online assessment, and interactive course material, and the changing role of teacher from authority to guide. Furthermore, "learning by doing" and "active learning" are two important principles that have emerged within constructivist approach, the online discussions and interactive tasks offered by online learning environments may be seen as great opportunity to practice these principles. For some learners, active participation in online discussion may be positively influential in their learning, besides discussing course topics online may be a very different experience for some learners than discussions in a face-to-face environment. (Gulati, 2004; Cox, et al, 2004).

Despite such enthusiasm about the Web-enhanced instruction, the potential of such instruction for teacher education and teacher professional development, particularly its effects on the pre-service teachers have not been explored in detail, yet. However, with the help of new facilities offered by Web-enhanced technologies, it has been accepted that pre-service teachers can encounter new opportunities to improve their teacher knowledge and skills more efficiently (Lafferriere et al, 2006). Additionally, it is claimed that Web-enhanced instruction "creates powerful learning environments in which students and teachers can become engaged learners, take responsibility for their learning, and co-construct their knowledge" (Lafferriere et al, 2006: p. 76). Moreover, as Kwonk-Sang et.al. (2003) pointed out. Web-enhanced instructions in teacher education would also enable student teachers to learn the skills of using technology in their classes.

The studies examining students' attitudes towards Web-enhanced instructions approved the general positive altitudes of students. For instance, Iman et al (2006) found out that college students had positive attitude towards most aspects of Web-enhanced instruction and identified many advantages of such instruction such as discussions about course content in discussion forums, communication with instructors, easy access to course materials, negotiating topics with classmates. In that context, Iman

(2006) suggested that attitudes of students toward Web-enhanced instruction have influence over the future use of Web-based instructional materials and further teaching activities integrating Web components in learning and teaching environment.

In the related literature, it is commonly agreed that the pre-service teachers develop their attitudes towards their course experience throughout their teacher education. Therefore, it becomes crucial to ensure pre-service teacher to experience effective use of technology. Thus, they can reflect their developed competence in technology use for language learning and teaching to their students in their future teaching practices (Kwok-Sang et al., 2003).

As online technology advances day by day, it becomes worthwhile to reexamine the characteristics of effective instruction. The characteristics addressed in this study include pedagogical, communicative and technical aspects. The impetus for the present study is to experiment the integration of Web component into higher education context; particularly into language teacher education since such Web integration is generally neglected. When available literature on language teacher education in Turkish context is reviewed, it is observed that in traditional teacher education, there is not any teacher-training course that is enhanced with web component. Thus, proposing and introducing such a web-enhanced methodology course for language teacher trainers, the present study intends to address this need and contribute to literature by providing insight about such course development and implementation.

Moreover, by examining the pre-service English language teachers' perceptions about the Web-component of methodology course, its implementation, it is also aimed to improve such implementations in teacher education programs as well as guiding practitioners about the pros and cons about such instructions.

### *1.1. Course Design*

In the present study, a face-to-face originated methodology course for pre-service ELT teachers was redesigned so as to provide an interactive, instructor-guided Web-enhanced course along with student-centered face-to-face instruction. Rather than highly structured Web-based environments for course organization, for the present study a less structured and more teacher-involved version. Web-enhanced instructional design was preferred. The goal of the online component of the course considered in this study was to extend the boundaries of the classroom in order to increase participation, improve the quality, enhance the interaction with and between students and instructor, and address students' needs more accurately.

The focused course in the present study, namely, "Methodology in the Area of Specialization I and II" is a two-semester course for the third grade students at the department of ELT that covers preliminary subjects in the methodology of teaching English as a foreign language. The primary goals of this course are to gain a teacher's perspective on learning and teaching English, to gain basic knowledge about methods and techniques to teach basic skills such as grammar, reading, speaking, listening and vocabulary, and to gain competence in observing and reflecting upon teaching practices based on theoretical framework.

In addition to the face-to-face sessions, this course was endowed with an online learning platform for information and material exchange, which was provided by campus licensed WebCT program. The WebCT provides supports for the courses that were held or enhanced via Web, using Web browsers as the interface for the course-building environment. Additionally, WebCT provides a variety of tools and features that can be added to a course by integrating communication tools such as bulletin board chat room, e-mails, a course Web site, also management tools for grading, tracking student interaction and monitoring student progress. These features can facilitate interaction between instructor and students (McCray, 2000).

The reason to include the online component to the course in this study was to extend the boundaries of the classroom and to engage more students in the learning-teaching process. Throughout the course theory and practice were integrated through theory-guided, reflective approaches on the basis of learner-centered

view. Traditional tasks such as listening to lectures, discussing in class, completing reading assignments, taking written tests and preparing micro teaching are also included. These activities were supported with online tasks, such as carrying out the in-class discussions in an online discussion platform, giving feedback to microteaching through online discussions and doing assignments online. Referring to the premise on the constructivist approach to learning, which emphasizes interactive tasks that would enable learners construct their own knowledge through negotiation (Lafferriere, et al., 2006), it is considered that such a course design can enable the collaboration of knowledge through social negotiation

## 2. Method

The aim of this study is to describe the Web-enhanced methodology course and to evaluate the effectiveness and efficiency of web component of a methodology course. In line with this aim, mixed research method, integrating both qualitative and quantitative data was adapted.

### 2.1. Research Questions

To address the aim of evaluating the effectiveness and efficiency of web component, the following research question was asked:

- What are the participants' perceptions about the Web-enhanced methodology course in terms of
  - a. pedagogical,
  - b. affective,
  - c. communicative,
  - d. technical aspects?

### 2.2. Participants

As a research setting of the study, the Methodology Course given at the 3rd year of the Department of English Language Teaching at Anadolu University was chosen. 25 students taking this course, participated the course. At the beginning of the term, the participants were introduced the web component and the requirements for this course. During the application, they received guidance whenever they needed.

### 2.3. Instrument

To determine the participants' ideas about the effectiveness and efficiency of web component in the Methodology course, a survey with open ended questions was used. Adapting De Villers' (2001) Web-CT questionnaire, a survey containing open-ended questions as well as multiple choice items for each aspect, namely, pedagogical, affective, communicative and technical aspects, was prepared.

### 2.4. Data Collection and Analysis

The survey on web component was given to the participant at the end of the academic term (14 weeks), the participants were asked to write all of their ideas and evaluation about the course in line with the items. After data collection, the multiple choice items in the survey were analyzed through descriptive statistics while the open-ended questions were analyzed through content analysis with two raters. The findings were discussed referring to each aspect under investigation.

## 3. Results

### 3.1. The participants' evaluation of the effectiveness of web-supported methodology course in terms of pedagogical aspect

When the participants' internet use was questioned, it was seen that most of them (68%) used Internet daily while 24% of the participants used it weekly. Only 8 of the participants reported that they used Internet seldom. That indicates that the participants have computer literacy and they are familiar with the applications required at the web-supported course.

To determine the effectiveness of Web-supported methodology course in terms of pedagogical aspect, the participants were asked to evaluate whether the web component was an aid or hindrance. The distributions of the participants' responses are presented in the following

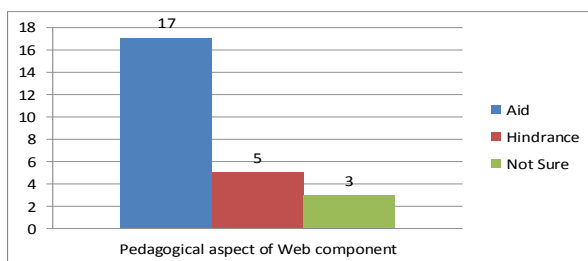


Figure 1. Participants' evaluation of the pedagogical aspect of web component

Most of the participants perceived the web-component as an aid to their learning experience. Only five participants considered the web-component as hindrance and three of the participants were not sure about the effect of web-component. The participants, who considered the web-support as a facilitating aspect, supported their opinions as:

St 5: "All the instructions we get from our instructors were clear and easy to understand

St 6: "it is effective for me to take instruction via Web"

St. 8: "They are very useful and help us to solve our problems"

The ones who perceived the web-component as hindrance to their learning process, mostly complained about technical problems. Thus, the reason underlying their negative feelings towards web-component is mostly technical problems caused by the system or themselves. One of the participants explained this as:

St. 12: "I think It can be more organized. I was sometimes in difficulty to enter the site"

### 3. 2. *The participants' evaluation of the effectiveness of web-supported methodology course in terms of affective aspect*

The effectiveness of the course in terms of affective aspect was examined with live questions. Firstly, their first impression when they encountered the WEBCT application in their methodology course was examined. The participants were generally positive to the new applications. They were curious and they had enthusiasm to participate a new application. For example;

St 1: "...useful for talking the course notes shown on the computer in the lesson. It saves time. "

St 23: " at the first time, I cant Join WebCT but then I learned how it is used it was impressive"

St 4: " It is useful to see the demos of my friends, good and bad aspects "

St 5: " I was curious "

The quotations revealed that the underlying reason for their positive impression is their familiarity with internet applications such as discussion boards and so on. Additionally, beyond the routinized methodology courses, they got excited for the new application. On the other hand, there were some negative first impressions. For example;

St 3: "It makes nonsense at first"

St 15: " unnecessary "

St 8: " It is very boring and time consuming "

St 13: " I couldn't understand anything, I was confused I thought it could be useful and may be enjoyable "

St 2: " confusing "

The quotations revealed that these negative opinions caused clue to prejudices toward internet use. When the internet use of the participants who explained negative impressions towards WEBCT was reexamined, it was seen that they either used Internet seldom or weekly due to their unfamiliarity with web applications they got negative impression towards WEBCT.

In addition, the participants' experience about WebCT during the course was questioned to reveal whether the participants' first impressions changed or not. It was also attempted to examine the effectiveness of this application in terms of participants' perceptions about WebCT. For the question of whether WebCT is user-friendly or not, most of the participants (20 out of 25) answered that WebCT is a user-friendly application. Only four of the participants found it as not user-friendly.

To help participants describe their experience with Web CT more, they were asked to explain which emotions they experienced during the applications. The results indicated that the participants most used positive emotions to describe their experience. The findings are given in the following.

Table 1. The adjectives used to describe Web component

	Adjectives	<i>f</i>
Positive Feelings	Motivation	10
	Satisfaction	7
	Achievement	8
	Feeling of success	5
	Desire to do more	4
Negative Feelings	Anger	4
	Helplessness	4
	Alienation	4
	Frustration	2
	Fear	1

As seen in Table 1 most of the participants defined their experience with the web-component as with word 'motivation'. So, it can be claimed that the participants got more motivated with the web-component in the course. The other words preferred by the participants to explain their positive feelings about the web-component were respectively 'satisfaction', 'achievement', 'feeling of success' and 'desire to do more'. Although the words with positive connotations were selected more by the participants, the participants chose some negative words to explain their experience such as the words of 'anger', 'helplessness' and 'alienation'.

### 3.3. The participants' evaluation of the effectiveness of web-supported methodology course in terms of communicative aspect

The WebCT application in this study was examined in terms of communicative aspects through ten questions. The first question was about the facilities that the participants used more in this application. The results showed that the participants mostly used discussion list to discuss their tasks and videos also course related issues. In addition, to download or review the presentations they used the WebCT. These facilities were followed with exam preparation and e-mail or contact with the classmates and instructors. The results showed that mostly discussion list/bulletin board was used. To question the effectiveness of this application, live more questions on the discussion list application were asked. For the question of whether they found online discussion as valuable or not, most of the participants answered YES, when it was asked to the participants who said discussion lists are not valuable, whether they wanted face-to-face assistance instead of online discussion, all of them said that they wanted to have face-to-face help. This finding pointed some of the participants got used to traditional methods and they did not feel satisfied with new methods.

Additionally, when the participants were asked whether they gained knowledge from the assistance, again most of them ( almost the same number of students) said yes they gained knowledge. Moreover, the participants were asked to evaluate overall whether the WebCT was an effective method. The results



showed that most of them agreed with the effectiveness of Web CT. In that sense, regarding the question on their preferences about the method, it was seen that the participants were generally happy with two methods: integration of web component in the traditional teaching

#### 3.4. The participants' evaluation of the effectiveness of web-supported methodology course in terms of technical aspect

As the other aspect under investigation, the technological aspect of web component was investigated with two questions. For the question of whether they experienced any technical problems, the participants mostly complained about their internet access problems or their unfamiliarity with web applications. Overall, they expressed that they were happy with the problems but since it was a new experience for them, they had some technical problems.

#### 4. Discussion and Conclusion

Enhancing instruction with web component emphasizes active learning bringing together the online and face-to-face classroom components that could provide educational environment highly conducive to student learning. The studies on technology supported instructions have stated that such instructions provide students with greater time flexibility and improved learning outcomes as well as time management skills, responsibility of own leaning and use of technology (McCray, 2000; Vaughan, 2007)

The findings of the present study are also compatible with the results of the related studies in literature, which pointed out the students' positive attitude toward such web-supported applications; the reasons of such enthusiasm of the students were explained as time flexibility. Likewise, in the present study, the participants were generally satisfied with the integration of web-component in the methodology course. They were satisfied with facilities of videos on the demos, discussion and feedback exchange.

Different from other studies In literature, the present study held the effectiveness of the web component from a multi-dimensional framework including pedagogical, affective, communicative and technical aspects. Accordingly, From pedagogical aspect, the application was perceived as an aid. From communicative aspect, it was appreciated thanks to discussion list and feedback exchange. Moreover, from affective aspect, they experienced more positive emotions. Lastly, from technical aspect, they complained about downloading and access problems. Thus, it could be claimed that as supported in literature (e.g. Vaughan, 2007), technology supported instructions provide students with greater time flexibility, improved learning outcomes, time management skills, responsibility of own leaning and use of technology. These trigger students' positive attitude toward web-supported applications. In the same vein, the pre-service teachers attending to Methodology course at the present study evaluated the web component as effective. The reasons of such enthusiasm of the participants were detected as time flexibility and effective interaction

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