# Motivating Students with Interactive Web-based Learning

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**Abstract:** As a fastest growing branch of distance education, Web-based learning is attracting more and more people. Interaction is an important factor that affects the learning process. It not only affects the learning effectiveness, but also the learner's motivation. To investigate the learner's motivational perspective of web-based learning materials, a posttest-only experiment was performed. The results from the experiment showed that college students who went through web-based learning materials implemented with elaborated immediate feedback outperformed those who learned the material through the regular website in the IMMS test. The interview data also supported the above conclusion.

## Introduction

The World Wide Web is attracting more and more people and increasingly used as a medium to deliver instructional materials. Web-based learning is becoming a fastest growing branch of distance education. Many courses have been developed and distributed through the web. However, a significant number of web-based courses are predominately designed to transmit information to the learner and lack interaction (Alessi & Trollip, 2001).

As an important factor that affects the learning process, interaction not only influences the learning effectiveness, but also affects the learner's motivation. In web-based learning environments, there are three types of interaction: students interact with instructors; students interact with other students; and students interact with the learning content (Moore, 1989). In the learning process, interaction can be used to confirm if the desired learning happens; provide inquiries asking for additional materials; navigate through the learning materials; and combine existing knowledge with new instructional content. Many means have been used for the first two types of interaction: email, listservs, chatrooms, bulletin boards, and audio and/or video conferencing. However, studies focusing on student-content interaction in web-base learning environments have not been found in the literature. Many strategies can be implemented into the learning materials to increase the interaction between the learner and the learning content and to motivate the student learning. One of them is to use immediate feedback. By integrating immediate feedback to the learning process, the web-based learning material becomes more interactive and motivates students' learning. This study investigated the motivational effects of elaborated immediate feedback in a web-based learning environment.

## Study

In this posttest only experiment research, student's motivational perspective of web-based instructional materials was examined through an Instructional Material Motivation Survey (IMMS) (Keller, 1999). To have a deep understanding of learners' attitudes toward the learning materials, an interview was also conducted after the learner finished the experiment. The subjects in the study were college students in various majors. The learning content is about copyright rules and principles, which is a very important topic for pre-service teachers. The control group went through the learning material presented in a regular website, which provided limited interaction between the learner and the learning content. The experimental group went through the learning material presented in a website which integrated elaborated immediate feedback strategy. In this group, the learner could interact more with the learning content by following the provided feedback information.

**Findings**

        The data collected through the IMMS and interview were analyzed with statistical procedures. The results showed that students in the experimental group outperformed those in the control group in the overall IMMS test. The ANOVA test indicated that the difference between the two groups was statistically significant. The analysis of the four subcategories of IMMS also indicated that the learning material embedded with elaborated immediate feedback was more attractive, and the students in the experiment group felt more satisfied with their learning. The data from the interview also supported the above conclusion. All the interviewed students expressed very positive attitudes toward the embedded immediate feedback strategy. They thought that strategy motivated their learning, provided helpful information to lead them to review their learning, and reinforced what they learned. Therefore, it can be concluded that immediate feedback can motivate students' learning in the web-based learning environment.

**References**

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