



Significance of web content creation in teaching Psychology among the B.Ed., trainees and their achievement

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ABSTRACT

Web Content is a core component of e-learning and includes issues such as pedagogy and learning and includes issues such as pedagogy and learning object re-use. Pedagogical elements are an attempt to define structures or units of educational material. For example, this could be a lesson, an assignment, a multiple choice question, a quiz, a discussion group or a case study. These units should be format independent, so although it may be in any of the following methods, pedagogical structures would not include a textbook, a web page, a video conference or podcast. When beginning to create e-learning content, the pedagogical approaches need to be evaluated. Simple pedagogical approaches make it easy to create content, but lack flexibility, richness and downstream functionality. On the other hand, complex pedagogical approaches can be difficult to set up and slow to develop, though they have the potential to provide more engaging learning experiences for students. Somewhere between these extremes is an ideal pedagogy that allows a particular educator to effectively create educational materials while simultaneously providing the most engaging educational experiences for students

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Introduction

Recent technological advances have created the possibility for new ways of learning and teaching. The Web has captured the imagination of more people than any other computer innovation (McCormack and Jones, 1998). Taking full advantage of the potential of the Web requires teachers to think about learning and teaching in new ways, as well as to master the technology itself. The Web-based classroom can support an existing teaching method or be used as a replacement, but according to McCormack and Jones, the former is currently the most common. As Rosen (1998) points out, however & quot; The World Wide Web is merely a tool, as is a chalkboard, overhead projector, or VCR. Tools don't teach. When effectively implemented they assist in the learning process. If learning on the part of the students has been helped by the use of a tool, then the tool has been used successfully & quot; There are reasons why the use of the Web in classrooms is not more widespread, including, but not limited to:

- ❖ knowledge it is not a simple and straightforward task to create and maintain an extensive Web-based Instruction site;
- ❖ reluctance some educators are hesitant to adopt new methods of instruction;

Resources few schools can afford the time, support, training, and recognition for teachers who wish to pursue new methods of instruction; and, infrastructure some schools simply do not have the resources to develop large computer infrastructures.

Web-based education organizes subject matter as hypertext documents (Burbules & Callister, 1996; Jonassen, 1986; Wilson & Jonassen, 1989) on the Internet, allowing the retrieval and display of not only text, but also for examples, graphics, videos, or audios, which have many pedagogical advantages. This

multimedia capability permits much more flexibility in the delivery of instruction by individuals selecting hypertext links, thus allowing the nonlinear interaction with information. This innovative technology can be used to complement customary instruction, or to provide complete course over the Internet,

The Web is a collection of cross-linked, usually graphical, 'pages' stored in computers around the globe, for providing friendly direct-manipulation interfaces for, or 'point-and-click' access to, worldwide sites discovered via browsing programs, e.g. Netscape's Navigator, and search engines, e.g. Yahoo!(PC Novice, 1996).

Web-based instruction

Web-based instruction refers to providing a learning environment that is mediated and supported via the Internet/Intranet and connected to a computer with hyperlinks to resources outside the instructional domain. The instruction is designed so that the computer displays lessons in response to learner/user interactions.

One aspect of Web-based instruction is the incidental learning that frequently occurs. In a traditional "face-to-face" instructional environment, learning is considered to be intentional – there is usually very little incidental learning. Computers and the Web have changed this model of instruction; they allow learners to view, retrieve, and store information "any place, any time". This type of learning is wonderful, but must be planned for through the type of hyperlinks the instructor provides. As teachers begin to develop web-based instructional components to their teaching strategies, they must keep the learning perspective in view – are the instructional strategies designed to enhance knowledge, but one is specific and the other is general. One is like hunting (training) and the other is like fishing (education).

Effectiveness of web based instruction

The question of whether or not WBI is more effective than other delivery media has theoretical importance. Educational Psychologist Richard Clark (1983; 1994) has been a long-time critic of studies and reviews that purport to show that newer, technologically-based instructional media are superior to existing media. While media is often used to refer to the general method of delivering training, here media refers to technological devices used for the purpose of instruction (Clark & Sugrue, 1995). Clark has argued that delivery media (such as computers or distance learning) are relatively inconsequential in affecting learning outcomes, compared to more powerful influences such as individual differences and instructional methods. Instructional methods refer to strategies used within a course to convey course content such as providing opportunities for practice or group discussions.

Clark (1983; 1994) criticized most media effectiveness research on two grounds. First, most studies fail to institute experimental controls sufficient to rule out alternative explanations from group differences. Second, Clark argued that most prior studies have failed to isolate instructional attributes that are unique to a single medium. For example, WBI may provide more opportunities for learner customization than CI, but: (a) classroom learning can provide some customization in some situations; and (b) opportunities for learner customization are not unique to WBI. Clark argued that if studies fail to isolate attributes unique to the medium, results of those studies cannot be accepted as evidence of the superiority of the medium. In short, Clark argues that there is nothing uniquely beneficial about any computer-aided instructional medium (including WBI). Arbaugh (2005) also detailed clusters of features of WBI that may lead to greater instructional categories: Effectiveness including media variety, facilitation of Web exploration, and learner ease and flexibility of use. The WBI enhanced the following 5

1. Instructional Design

- ❖ Size and level of granularity of each lesson
- ❖ Sequencing of instructional material
- ❖ Ease of navigation of the web course
- ❖ Blending of web-based instruction and face-to-face Instruction

2. Quality of Instructional Material

- ❖ Clarity of lesson objectives
- ❖ Organization and appropriateness of content
- ❖ Adequacy of practice and assessment exercises

3. Teacher-Student Interaction in the Integrated Approach

- ❖ Support for individual student needs
- ❖ Support for different learning styles
- ❖ Provision of feedback and guidance

4. Support for Teaching Programming

- ❖ Combined approach assisted teaching
- ❖ Combined approach would encourage more students to write the General Proficiency

5. Overall Rating of the Teaching-learning Experience

- ❖ Effectiveness of the integrated approach

Need for the study

The following benefits of Web Based Instruction necessitates this study.

- ❖ Flexibility to pursue education at personally convenient times.
- ❖ Ability to take time to compose thoughts contributed to class discussions on newsgroups or list serves (asynchronous communication).

- ❖ Ability to interact with classmates in different locations using real time text, audio, or video (Synchronous communication).

- ❖ Reduction or elimination of travel cost to attend lectures.

- ❖ Wide range of students in a class (regional, national or global participation) resulting in a wider range of opinions and views shared in class discussions.

- ❖ Ability to progress in the course material at the student's own pace (self-paced learning) and in order of their own personal needs non-linear learning).

Objectivities of the study

- ❖ to select suitable topics in psychology which are amenable for the development of web based instruction at B.Ed., level

- ❖ to develop web based instruction for the selected topics in psychology at B.Ed., level

- ❖ to develop suitable achievement tests for the selected topics in psychology at B.Ed., level

- ❖ to validate the developed web based instruction in psychology at B.Ed., level

- ❖ to validate the developed achievement tests in psychology at B.Ed., level

- ❖ to find out the effectiveness of web based instruction in psychology at B.Ed., level

- ❖ to find out the influence of web based instruction on the following B.Ed., teacher trainees background variables

- a. Time Management

- b. Study Habits

- c. Interest in learning through web based instruction

- d. Emotional Intelligence of students

Hypothesis of the study

There is no significant mean difference in achievement in psychology at B.Ed., level between the group taught through web based instruction and the group taught through conventional method of teaching.

SAMPLE

The sample size consists of 100 B.Ed., teacher trainees using the technique of stratified random sampling. Fifty students will be assigned as Experimental group and

Tools used for the study

- ❖ Achievement test in Psychology at B.Ed., level

- ❖ Suitable test / Questionnaire / rating scale for the selected variables

The tool used in the study is Achievement in Psychology Questioner. The tool consists 25 questions in each lesson, objective types with four multiple answers.

Experimental design

Effectiveness Study: To find out the effectiveness of the developed web based Instruction in Psychology at B.Ed., level pre-test, Post-test Equivalent group Experimental design will be followed

Influence Study: To find out the influence of Web Based Instruction on the selected variables Relationship with achievement of the selected variables cum post defacto experimental design using the scores of the selected variables design will be followed.

Limitations of the study

- ❖ In Psychology at B.Ed., level many topics have been prescribed. Owing to the constraint of time and money only few topics are covered for this study.

- ❖ There are two medium of instruction namely English and Tamil prescribed by the Tamil Nadu Teacher Education University. Owing to the constraint of time and money only Tamil/English medium is considered for this study.

Statistical techniques

Different Statistical Measures such as Mean, Standard Deviation and 't' test to Analyze the significant Difference.

The following statistical techniques will be used

- ❖ Measures of Central Tendency
- ❖ Measures of Variability
- ❖ Differential Studies – 't' test
- ❖ Relationship Study - Correlation

Data analysis

This section deals with the analysis of the Mean and Standard Deviation of the pre-test.

Table : 1

't' value between pre test and post test scores of Control group in the Web content Creation

CONTROL GROUP	N	MEAN	SD	't' test
PRE-TEST	50	20.87	3.52	19.80
POST-TEST	50	29.7		

The computed 't' value 19.80 is greater than the table value and hence there is a significant difference at 0.05 level between the pre-test and post-test scores of control group in the Web Content Creation. Hence the null hypothesis is rejected.

Table : 2

't' value between pre test and post test scores of Experimental group in the Web content Creation

EXPERIMENTAL GROUP	N	MEAN	SD	't' test
PRE-TEST	50	21.87	4.70	29.5
POST-TEST	50	39.5		

The computed 't' value 29.5 is greater than the table value and hence there is a significant difference at 0.05 level between the pre-test and post-test scores of Experimental group in the Web Content Creation. Hence the null hypothesis is rejected.

Table : 3

't' value between Control Group and Experimental group scores of pre-test

PRE-TEST	N	MEAN	SD	't' test
CONTROL GROUP	50	20.87	3.70	2.0
EXPERIMENTAL GROUP	50	21.8		

The computed 't' value 2.0 is lesser than the table value and hence there is a significant difference at 0.05 level between the pre-test scores of control group and Experimental group. Hence the null hypothesis is rejected.

Table : 4

't' value between Control Group and Experimental group scores of post-test

PRE-TEST	N	MEAN	SD	't' test
CONTROL GROUP	50	29.75	4.55	16.7
EXPERIMENTAL GROUP	50	39.5		

The computed 't' value 16.7 is lesser than the table value and hence there is a significant difference at 0.05 level between the pre-test scores of control group and Experimental group. Hence the null hypothesis is rejected.

Conclusion

Web Content Creation is a narrow term and most often refers to as supplements to traditional instruction. The B.Ed., Teacher Educator has to pay a pivotal role for the success of using the Web Content Creation. The finding of the studies are there is a significant difference between pre-test and post-test scores of Control Group in the Web Content Creation, there is a significant difference between pre-test and post-test scores of Experimental group in the Web Content Creation, Control group and Experimental group differ significantly in the pre-test and Control group and Experimental group differ significantly in the

Post test. And thus, this investigation proves that there is an effectiveness of Web Content Creation in Psychology.

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