



**The Effect of the Interaction Between the two Blogging Types
(Separate - Sequential) and Comments Style (Detailed - Concise)
in Electronic Discussions on Development of Educational
Technology Students' Skills of Collaborative Learning and
Critical Thinking**

Master Thesis

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Research Summary

Introduction

Online communication tools play a vital role in the educational process, especially within higher education institutions. E-learning via the web is an open source portal for presenting programs and curricula according to high-precision standards. In recent years, the Internet has witnessed a massive flow of information through the applications of the second generation of The Web 2.0, which in turn reflected the ability of users to share digital content faster than it was, as the applications of the second generation of the Web (Web 2.0) provided services to support communication and interaction between students, thus enriching digital content and enhancing the philosophy knowledge sharing and student-centered learning.

Blogs are one of the tools that are used by faculty members in the educational process, to address the distinct learning needs, interests, aspirations, and make him a direct partner in the educational process through conducting a verbal dialogue that leads the student to search for knowledge, and link the information that has been previously received with new information as part of their learning.

There is a growing body of literature that recognizes the importance of social communication tools. Through educational technology research in

recent years, we find that blogs have contributed to the development of teaching methods for faculty members and university students alike, it gives faculty members a new method to stimulate thinking and participation of students and provide an opportunity for questions and discussion, while respecting their ideas and suggestions, and this method helps in developing student's critical thinking skills, by searching for information in available open resources via the Internet, open databases or libraries, and students write down their information in preparation for discussion within the blog and each student is presented his findings and debate the director organize the discussion.

Research problem

Higher education institutions are attracted to the flexibility of online learning, through interactive web 2.0 tools and applications in teaching rather than the traditional learning content, as a number of studies have indicated that employing web 2.0 tools in e-learning helps to facilitate students' absorption of the educational subject , and giving them an opportunities to improve some skills e.g. decisions making, problems solving, interpersonal communication, leadership, and critical thinking. In light of this, the specific objective of this study was to investigate the effect of the difference blogging types (separate and sequential) and their interaction with the commentary method inside the blog (detailed - concise) in electronic discussions on developing collaborative learning skills and critical thinking among students of educational technology department at Fayoum University.

Research Questions

1. What is the main effect of the difference of the two blogging patterns (separate - series) in electronic discussions on developing

collaborative learning skills and critical thinking among students of educational technology?

2. What is the main effect of the difference in the comments style (detailed - concise) in electronic discussions on developing collaborative learning skills and critical thinking among students of educational technology?
3. What is the main effect of the interaction of the two blogging patterns (separate - series) and the comments style (detailed - concise) in electronic discussions on developing collaborative learning skills and critical thinking among students of educational technology?

Research Variables

This investigation takes the form of a case-study to obtain an in-depth analysis of the different types of blog characteristics to investigate the research variables, as described below.

A. Independent variables

- Blogging patterns (separate - sequential)
- Comments style (detailed - concise)

B. Dependent variables

- Collaborative learning skills.
- Critical thinking skills.

Research Methodology

The importance and originality of this study are that it explores to what degree do different blog design characteristics (e.g. separate - sequential) and comments length (e.g. detailed - concise) influence learners' engagement based on connectivism theory? Thus, variables in the design,

development, providing, management, and evaluation of these resources and their role in overcoming learning problems are one of the most important elements of this research, so the researcher followed the two approaches (descriptive and semi-experimental).

Research hypotheses

1. There are no statistically significant differences in the two types of blogging (separate - series) on developing collaborative learning skills among students of educational technology.
2. There are no statistically significant differences in the two comments styles (detailed - concise) on developing collaborative learning skills among students of educational technology.
3. There are no statistically significant differences as a result of the interaction between the two blogging patterns (separate - sequential) and the two comments styles (detailed - concise) on developing collaborative learning skills.
4. There are no statistically significant differences in the two types of blogging (separate - series) on developing critical thinking skills among students of educational technology.
5. There are no statistically significant differences in the comment's styles (detailed - concise) on developing critical thinking skills among students of educational technology.
6. There are no statistically significant differences as a result of the interaction between the two types of blogging (separate - sequential) and the two commentary styles (detailed - concise) on developing critical thinking skills.

Research tools

Research tools are used to obtain data and information that contribute to explaining aspects of the study and is one of the criteria for evaluating the quality of scientific research for its control of research variables. The research included the following tools:

A. Experimental tools

- A program based on separate blogs with detailed comments.
- A program based on series blogs with detailed comments.
- A program based on separate blogs with concise comments.
- A program based on series blogs with concise comments.

B. Measurement tools

- Learning Analytics observation method.
- Collaborative learning questionnaire.
- Critical thinking scale (prepared by Sayed Subhi, Najwa Ibrahim, Hatem Youssef Mahmoud Al-Bunni, 2015).

Research Design

The main goal of the current study was to investigate the relationship between different types of blog post characteristics (e.g. separate - sequential) and comments length (e.g. detailed - concise) to foster student collaboration in “Introduction to Computers” course offered by Fayoum University. This course provides a general introduction to computers, operating systems, software applications, hardware, and data communications. Teaching team are used a blended learning method which

combines, online educational blogs where learners would work together to complete different activities and had the chance to comment and interact with their peers. With opportunity for weekly face-to-face lectures. The initial sample consisted of 200 students, and they were divided into four groups equally (refer to Table 1). Each group collaborated with a different method and practice as we will discuss in detail in the following sections.

Results

The most interesting finding was that discussions of different types led to an increase in collaborative learning rates among students, where it find that 86% of the students of the four experimental groups had their response between (strongly agree, agree), where the total averages of the four groups reached 105.5 while the standard deviation did not exceed 7.2. A possible explanation for this might be that that the CSLab blog-based learning environment was designed with a codified scientific method that relies on free activities in which students contribute greatly, where educational activities were organized in a good manner that depends on free discussion between team members, and in light of the connectivism learning theory. The results also revealed that there is a positive correlation between the different blogging formats on developing critical thinking skills for the research sample. The second major finding was that the four groups obtained high level of collaborations during their learning. Which indicate that blog interaction increasing the collaboration among learners regardless its characteristics.

Research recommendations

This thesis has provided a deeper insight into how Web 2.0 technologies support teaching and learning via web technology. In the light of the results of the current research, the importance of electronic education is evident, especially in the circumstances of suspension of study due to the new Corona virus COVID-19, and the consequent decisions to teach via online platforms. Therefore, the current research recommends the need to take advantage of social networks via the web in teaching and training, as it has proven its effectiveness on developing collaborative learning skills and critical thinking among students. The research suggested setting up a Central eLearning unit at the Faculty of Specific Education, which would supervise the production and activation of the college's three departments, and recommendations were concluded with a set of prospective research to support e-learning in the digital age. To sum up, one of the key challenges of online learning is leading discussions can also be one of the most rewarding. Considerably more work will need to be done to determine how blogging increases students' interests and engagement using different discussion styles e.g. snowball, fishbowl, and synchronous brainstorming in relation with different learning styles.