
**Topic:** an investigation of how students use web searching strategies and their outcomes along with analyzing their web experiences, epistemological beliefs, and searching tasks.

I. **Research Questions:**
   1. What’s the correlation among students’ web experience, epistemological beliefs, web searching strategies, and searching outcomes?
   2. What are the effects of different types of web searching tasks and the searching factors within the different tasks?

II. **Subjects:**
This study involved 49 male and 38 female students from a public junior high school in Taiwan. These students were selected from four eighth grade classes. Most of the students participating in this study had computers and web connections at home. In addition, all the participants had taken computer courses since elementary school and many other courses that require information searches on the web for academic purposes.

III. **Instrument:**
In this study, students had to fill out a questionnaire known as Epistemological Belief Scale (EBS), which assessed students’ epistemological beliefs. The questionnaire included nine questions but only six were used for this study. Each of the six questions contained three options with only one answer that reflects students’ epistemological beliefs. If a student chose the correct answer they received 1 point but if incorrect they received 0 points. Students who received high EBS scores were more likely to construct their own knowledge based on prior knowledge and experiences in addition to showing a proactive attitude towards studying and learning. Those who received low EBS scores tended to conceptualize knowledge and learning as simple accumulation. In addition, students had to complete three searching tasks within their computer class, which were recorded by a screen capture software called Camtasia Recorder. The recorded data was then further analyzed through five quantitative indicators. The quantitative indicators included (1) number of keywords, (2) number of visited pages, (3) maximum depth
Reflection Three

of exploration, (4) refinement of keywords, and (5) number of words used in the first keywords.

V. Procedure:
A total of eight-seven participants were asked to complete a six question EBS questionnaire based on their epistemological beliefs. Then students had to complete three searching tasks in which 20 minutes was provided for each task. The three tasks included both “open-ended” and “close-ended” questions. The total score for all three tasks was based on a 0-30 point scale. The participants searching process was recorded and reviewed by two expert teachers. The data analysis was based on accuracy, richness, and soundness.

IV. Findings:
The findings of this study indicated that students’ web searching strategies and visited pages were significantly correlated with the number of keywords. This was due to the fact that the more keywords the students used to search, the more related pages were listed to explore. Another correlation was found between the refinement of keywords and the number of words used in the search. This correlation showed that the better the students refined their word searches, the better the ability of metacognition. Students who had a better ability of refining keywords performed better in task one and two closed-ended search tasks. Finally, students’ epistemological beliefs were significantly correlated with visited pages and depth of exploration. Students who had more constructivist-oriented epistemological beliefs, tended to visit and explore less webpages which was due to having better judgment on the relevancy of webpages. These students were more likely to achieve better searching outcomes in less close-ended and open-ended tasks.

VI. Usefulness of this research:
The research findings were nothing new and the conclusions seemed to state the obvious. Students with more search experiences were more successful in their web findings. These students can filter out information and effectively complete a task. Educators today need to continuing working on enhancing and guiding students’ metacognitive abilities so that in the future students can complete web searching tasks correctly and efficiently.