Development a Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in the North-East of Thailand

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Abstract
The purposes of this research were to develop a Web-Based Training Model using Collaborative Learning for Development of Creative Thinking in Website Instruction Design of Academic Standing Special Expertise Teachers in the North-East of Thailand and to study the effects of Collaborative Learning with different team projects upon Creative Thinking in Website Design of these teachers. This research was a quasi-experimental Randomized Posttest-only Control Group Design. Due to the nature of the registration process and enrollment of Academic Standing Special Expertise Teachers in the North-East of Thailand, multi-stage random sampling on Social Media was used in this research. The research was conducted on sixty-four Academic Standing Special Expertise Teachers in the North-East of Thailand, during the 2011 academic year. They were randomly grouped by their basic characteristics such as sex, age, academic level, and location of school, into two equivalent-treatment groups with thirty-two teachers in each group. These two treatment groups were assigned to different types of Web-Based Training (WBT), which were full-page and scrolling-page Web-Based Training models. The research instruments are full-page and scrolling-page Web-Based Training, entitled ‘Introduction to website design’, and The Rubric scoring to evaluate the collaborative learning of the teacher team project website design. The Data were analyzed by independent t-test at .05 level of significant.

The research results were as follows:
1. A model for the Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design consists of 5 components: Input Analyzing, Content Designing, Online Applying, Learner Creating, and Facilitator Evaluating. The Instructional Training Process focused on a Creating approach and a Team project approach.
2. The Efficiencies of the Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in the North-East of Thailand were 82.38/80.64 for full-page type and 81.24/80.58 for scrolling-page type, all higher than the general standard criteria 80/80.
3. There was statistical significant difference effect between full-page and Scrolling-page Web-Based Training upon Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in North-East of Thailand at the .05 level of significant.

Key words
Web-Based Training, Collaborative Learning, Creative Thinking, Full-page, Scrolling-page.

1. Introduction
Currently, Technology of communication on the internet is very famous that we can link to anywhere in the world. That we can apply into educational technology, specially the resource on the internet called “world wide web” or “www.”, which is the service on the internet that we can connect to any education resource in the world, so you can apply it for arrange any instruction like unlimited by making the interaction between teachers and students. It occur the small group about 3-5 students of online learning society which they could access on world wide internet and resource that we got in the website to build any support for make students learned in anywhere and anytime. (Khan, 1997) Web-Based Training is the process that teachers need to give precedence to the students and give them chances to learn by themselves and it might makes the students use the appropriate way to create a meaningful knowledge (Jonassen 2000). These make me interest to study the research entitle: Development a Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in the North-East of Thailand.
2. Objectives

1) To develop a Web-Based Training Model using Collaborative Learning for Development of Creative Thinking in Website Instruction Design of Academic Standing Special Expertise Teachers in the North-East of Thailand.

2) To study the Efficiencies of the Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in the North-East of Thailand.

3) To study the compare effect between full-page and Scrolling-page Web-Based Training upon Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in North-East of Thailand.

3. Methodology

3.1 Research Design

This research was a Research and Development, which were documents study in the first stage, field testing efficiency of WBT in second stage, and quasi-experimental by Randomized Posttest-only Control Group Design in the third stage.

3.2 Subjects setting

The subjects of this research were: five Professors in Educational Technology in the first phase, forty Academic Standing Special Expertise Teachers in the second phase, and Academic Standing Special Expertise Teachers in North-East of Special Expertise Teachers in North-East of Thailand, multi-stage random sampling by Social Media Application to random for sixty-four teachers, during the 2011 academic year. They were randomly grouped by their basic characteristics such as sex, age, academic level, and location of school, into two equivalent-treatment groups with thirty-two teachers in each group in the third phase.

3.3 Instruments

The instruments of this research were: Item-Objective Congruency Index (IOC) questionnaires for experts review in the first phase, two Web-Based Training types which were full-page and scrolling-page Web-Based Training, with the same entitled ‘Introduction to website design’, and rubric scoring test in the second and the third phase.

3.4 Data Collection and Analysis

Phase 1: Researcher sent free online survey to assess the consistency between the content and purpose of the behavioral patterns of web-based training professionals to identify the five people from the IOC, and analyzed, which were between 0.40 to 1.00 and adjusted based on expert advice. Of these IOC corresponds to the order of ascending. Prepared a critical component of the Web-Based Training to design a website for upon Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in North-East of Thailand. Which consists of five elements, including Input Analyzing, Content Designing, Online Applying, Learner Creating, and Facilitator Evaluating. The Instructional Training Process focused on a Creating approach and a Team project approach. The results of Web-Based Training components shown in Fig. 1.

The five-components of WBT: Input Analyzing, Content Designing, Online Applying, Learner Creating, and Facilitator Evaluating or ICOLF model.

Phase 2: Create a Web-based training using learning management system LMS Moodle, which relies on five key elements, including Input Analyzing, Content Designing, Online Applying, Learner Creating, and Facilitator Evaluating, entitled website design content which in the two basic types of sites for full-page and scrolling-page. Then take these Web-Based Training model to professionals in the same groups to review, the researchers used a modified the model to more complete. And used the both model to the online experimental in a one to one group, a small group and field testing of fifty-six teachers to evaluate the efficiencies of the two Web-Based Training models, forty in each WBT type. And the final Efficiencies (E1/E2) were 82.38/80.64 for full-page type and 81.24/80.58 for scrolling-page type. The results of efficiencies (E1/E2) of WBT shown in table 1.

<table>
<thead>
<tr>
<th>Testing</th>
<th>N1/N2</th>
<th>Full-page</th>
<th>Scrolling-page</th>
</tr>
</thead>
<tbody>
<tr>
<td>One to one testing</td>
<td>4/4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Small group testing</td>
<td>8/8</td>
<td>74.24/72.78</td>
<td>73.82/72.14</td>
</tr>
<tr>
<td>Field testing</td>
<td>16/16</td>
<td>82.38/80.64</td>
<td>81.24/80.58</td>
</tr>
</tbody>
</table>

Phase 3: The two Web-Based Training models were applied to sixty-four academic standing Special Expertise teachers in order to compare the creativity of teachers trained to use a full-page and scrolling page. After this treatment, and used the rubric scoring to evaluate the collaborative thinking of the teacher team project website design in creativity of the teachers. The results showed that, there was significant difference effect between full-page and scrolling-page Web-Based Training upon creative thinking in website design of the teachers in North-East of Thailand at the .05 level. The results t-test shown in table 2.
Table 2 The results of significant difference effect between full-page and scrolling-page WBT upon creative thinking

<table>
<thead>
<tr>
<th>Web-Based</th>
<th>Post Test</th>
<th>X</th>
<th>S.D.</th>
<th>t-test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-page</td>
<td>50</td>
<td>36.63</td>
<td>2.5368</td>
<td>0.0068</td>
<td>.00*</td>
</tr>
<tr>
<td>Scrolling-page</td>
<td>50</td>
<td>34.91</td>
<td>2.3740</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

4. Conclusion

The research results were as follows:

1. A model for the Web-Based Training model using Collaborative Learning for Development of Creative Thinking in Website Design consists of 5 components: Input Analyzing, Content Designing, Online Applying, Learner Creating, and Facilitator Evaluating. The Instructional Training Process focused on a Creating approach and a Team project approach.

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3. There was statistical significant difference effect between full-page and Scrolling-page Web-Based Training upon Creative Thinking in Website Design of Academic Standing Special Expertise Teachers in North-East of Thailand at the .05 level of significant.

5. Discussion

5.1 Figures and Tables

All figures and tables should be placed after their first mention in the text as possible. Large figures and tables may span across both columns. Place figure captions below the figures and flush to the left margin within a column. Also, place descriptive table titles above the tables and flush left. If figure has two parts, include labels “(a)” and “(b)” as part of the artwork. Colour figures are also welcome. Please verify that the figures and tables mentioned in the text actually exist and are used. Please do not abbreviate the word “Table” and only the necessary grids should be traced (see for example Table 1).

When citing figures in the text, they should be referred as, “Fig. 1” or “Figs. 1 – 3.” Use “Figure” or “Figures” when it starts the sentence and also do not abbreviate “Table”. There should be one line of space above the figure and one line of space below the caption before the text continues as to avoid confusion with the text. This is also applied to the table. Note that the Table may cover two columns if it is necessary.

5.2 Equations

Equations should be typed using sophisticated tools such as MS Equation Editor, Math Type, or Aurora (with little knowledge of LaTeX).

6. Acknowledgement

Support was received from the Fund for New Researcher 2010 of Innovation and Research in Learning and Teaching at Khon Kaen University, Thailand. A special thanks to all the teachers of North East of Thailand, who took the time to participate in our research on effective practices. Their contributions were extremely valuable.

7. References

7.1 Books