Designing Tablet Application Learning Environment to Enhance Analytical thinking on The Principles of Computer for Vocational Certificate Student

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Abstract: Since technological changes always. Tablet is a part of teaching but nature of teaching is also unfavorable for the students to learn the content. Students will continue to focus on memorization and will not be able to apply this knowledge to the real problems. This paper presents the implemented open learning environments (OLEs) to design tablet application learning environments to enhance analytical thinking. The target group consisted of 40 first year vocational certificate students. The research procedures were as followings: 1) to examine the principles and theories regarding constructivism, cognitivism, analytical thinking, multimedia learning and open learning, 2) to synthesize designing framework of tablet application learning environments to enhance analytical thinking, 3) to design and development tablet application learning environments to enhance analytical thinking. The result shows that six components to design tablet application learning environments for effective were: problem base, resource, collaborative learning, coaching, scaffolding, and analytical thinking center.

Keywords: Constructivist, Learning environment, Analytical thinking

1. Introduction

Learning in the 21st century, both of instructors and the learners can learn together. In the present, the roles of the teachers and students have been changed. The students can learn outside the classroom they can exchange and construct their knowledge by themselves around their environment and including they can bring technology use for their learning (Phitoon Srifha, 2012).

The analytical thinking is the person who has a letter of analytical thinking more they the others about the development of intelligence, the deeply of analytical thinking must to use the abilities of observe, searching and how to indentify for the reasons. Also, when the person can link about the interpret to the understanding it's might be get a fact of the knowledge for solve the problems including the assessments and the decision for everything correctly (Chaijaroen, 2009)

This is consistent with the guidelines of knowledge based on Constructivist. The relationship between what we found was that cognitive performance. Create an intellectual structure (Cognitive Structure), known as the "schema" The constructivist also believe that the learning is a process of construct the knowledge more that perceive the knowledge. Also the constructivist will be focusing on the constructivist of the individual knowledge appropriate (Chaijaroen, 2011).

When the students were motivated by the problem, the students need to find a solution by the students will be asked to analyze a problem as the reason for seeking knowledge and ideas to link to the

approach to do it. Analytical thinking That means being able to identify the elements of one or one subject. To identify causal relationships that lead to the assessment of value for a decision. By sharing skills, analytical thinking, the three following criteria: 1) ability to identify the elements of one or one subject 2) the ability to identify the causal correlation, and 3) the ability to assess their value. What The decision to learning environments on the tablet. Another alternative is to promote analytical thinking. Learning environments on tablet features are Hypertext / Hypermedia That can link various learning resources. The learning resources that are abundant, it will be something that encourages students to expand thought processes to think critically. Synthesis solution to get those out how best to implement the solution.
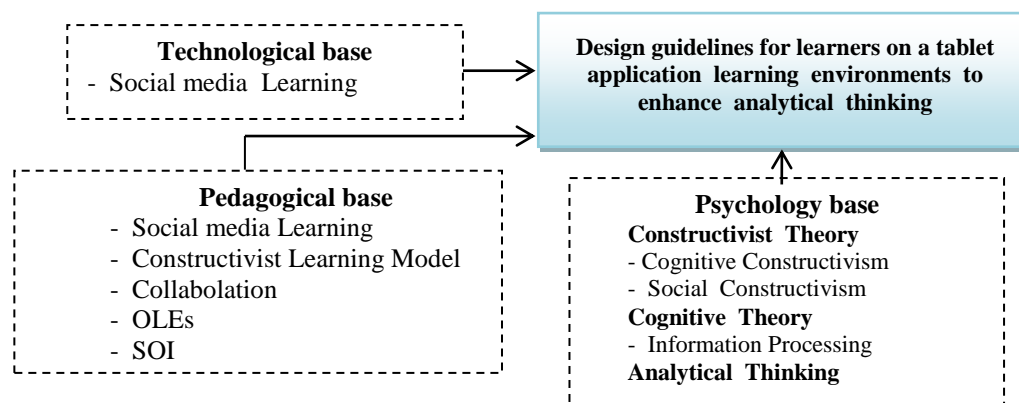
Considering in detail the class under real context. Found that teachers will focus on knowledge-based. More than an intellectual exercise for the students to acquire advanced skills. The media used for the learning environment, it is only the content knowledge of teachers entering the study. And does not support the analytical thinking skills of students. For this research, the researcher has developed and designed a learning environment on a tablet application learning environments to enhance analytical thinking about the principles of computer.

2. Theoretical Framework

The theoretical framework shows five important theoretical foundations as follows: (1) Pedagogical base, (2) Psychology base, and (3) Technologies base (4) Media base.

3. Results

Design guidelines for learners on a tablet application learning environments to enhance analytical thinking of students. The study, principles, theories, and research related to analytical thinking of students. As well as the design of the learners on the tablet consists of (1) the importance of designing learners states (2) the Constructivist Theory (3) the Cognitive Theory (4) The analytical thinking Then the researchers have synthesized a theoretical framework of the environment on the tablet as follows; As shown in Figure 1.

Figure1. Theoretical framework learners on a tablet application learning environments to enhance analytical thinking

4. Conclusion and Future Work

Design effects on learners. Network based on Constructivist. That promote analytical thinking, for the first year vocational certificate students found that the concept. Theory of learners on the network components, taken as a basis for design with 3 primary importance are: (1) the basic technology is the Application learning (2) basic science teaching is Application learning environment, Constructivist Learning Model (Collabaration, OLEs Model, SOI Model) and (3) basic psychology; Learning is

Constructivist theory Whistler. Containing Cognitive Constructivism and Social Constructivism. Theory of Cognitive Information Processing includes the use of analytical thinking that is because the researcher has studied the principles, theories, and research related to analytical thinking of students. The principles of design.

Learning on the network based on Constructivist that promote analytical thinking of students. The constructivist theory and media features study the context of current conditions in the real context as a basis. Concept and design Learners network comprises four main concepts: (1) to encourage the students to lose balance. Intelligence and promote analytical thinking (2) to support intellectual balance and promote analytical thinking (3) to encourage students to create awareness and promote analytical thinking and (4) to adjust the to balance intellectual. All concepts help promote knowledge creation. And analytical thinking of students. That can link the theories that are fundamental to the design of learning environments on the tablet. The design study The synthesis of elements learners on a tablet application length. That promote analytical thinking about the work of the computer for the first year vocational certificate students 6 components are (1) the problem base (2) resource (3) collaborative learning (4) analytical thinking center (5) scaffolding and (6) coaching

Acknowledgements

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