

Microlearning of web fundamentals based on mobilelearning

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Abstract

In nowadays there are many kinds of problems in the system of higher education. One of them is: everyday students get very huge amount of information. In one day student may have 5 - 6 lessons. This means that student have to read at least one chapter for each lesson. This reading takes about 1 - 2 hour to read chapter and to understand it. All of them take very big amount of time for a student to understand all lessons and it is very hard for him/her to do everything in time. This paper explains a study of work microlearning application for mobile phone with Android OS. It consists of general introduction and purpose. There is an application at the end of paper.

Keywords: Microlearning, Mobilelearning, Web fundamentals.

1. Introduction

In nowadays there are many kinds of problems in the system of higher education. One of them is: everyday students get very huge amount of information. In one day student may have 5 - 6 lessons. This means that student have to read at least one chapter for each lesson. This reading takes about 1 - 2 hour to read chapter and to understand it. All of them take very big amount of time for a student to understand all lessons and it is very hard for him/her to do everything in time.

In standard education process student have to read very much if he/she wants to learn some topic. He reads a lot of information about the things that are concerned with his topic. This is a good practice but unfortunately not now. Cause we are living in information age and information is increasing every day. And it is not possible to know everything. Especially this is true for computer science where new technologies are developed almost every day. The thing that you learned yesterday

may be not needed tomorrow because it will be old and a new technology will come and there is need to relearn again.

So what is solution in this situation? Microlearning method can be used. The main principle of this method is to divide huge complex information into many small pieces and try to make them as easy as possible. Leave only main parts, only necessary things and try to give more good examples. This makes work very easy. You can learn a small part of information less than 15 minutes and then practice it [1][4]. By this way student learn step by step until he/she will learn everything at all. Now when student knows enough about definite topic lecturer can deal with complex things related to topic. Because student is aware of what it is about.

Let's explain by using an example of Ajax technology. There are many books that explain what this technology is about. But most of these books are very huge. Instead many people are making search request in Google and find good tutorials for them. As an example there is w3schools.com[5]. Why? Because it takes about 20-30 minutes for student to understand the main principle of Ajax without going into details, such as student will be able to create own small applications. Student wants to learn more about (to learn some specific or more detailed information) after then student can read a book.

2. Purpose of study

The purpose of this study is to investigate how microlearning approach based on mobile technology can help in current system of education. How can it solve nowadays student's problems related with understanding

complex information, especially for those whose language of education is English.[2] To develop such a mobile application that will give possibility for students to learn material easily and quickly. This idea is realized on web programming lectures in Suleyman Demirel University.

Android operating system is used to make an application to be available for most students. [3] The main purpose of it is ability to access it everywhere and anytime. It is very mobile. But being a mobile application is not enough.

In application we try to take into account following important things:

- Time: relatively short effort, operating expense, degree of time consumption
- Content: small or very small units, narrow topics.
- Curriculum: small part of curricular setting, parts of modules, elements of informal learning.
- Mediality: electronic media
- Learning type: repetitive, activist, reflective, constructivist

3. Application

In main menu you can select one of Web Programming Course topics as in figure 1.



Figure 1 Main menu of application

Each topic consists of subtopics with explanations, pictures, examples and other things as in figure 2. You can scroll them. Choose the one you like by clicking over it figure 3.



Figure 2 List of topics

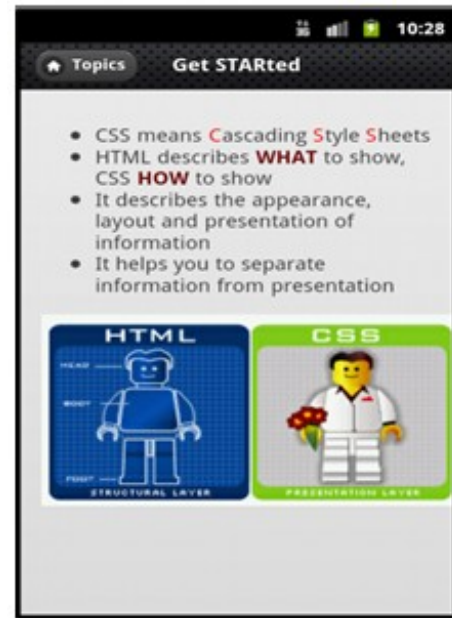


Figure 3 Topic in microlearning style

4. Conclusions

Microlearning gives very big opportunities to people, especially developing of Web 2.0. Now every person unconsciously use the microlearning approach while reading tutorials, forums, wiki, blogs and other things like this. And finally mobile learning also made some changes in this process. Mobile devices give the opportunities to people to learn everywhere at any time. It is small computer in student's pocket.

References

- [1] Hug, Theo; Lindner, Martin; Bruck, Peter A.
(2006): Microlearning: Emerging Concepts, Practices and
Technologies after e-Learning. Proceedings of Microlearning
2005. Innsbruck: Innsbruck University Press, 2006.
- [2] Micro Learning and Narration, Theo Hug, Innsbruck, Paper
presented at the fourth Media in Transition conference, May 6-
8, 2005, MIT, Cambridge (MA), USA
- [3] www.android.com
- [4] www.microlearning.org/