

## Developing of contents and implementation of E-learning experiment in Informatics in Schools in Bosnia and Herzegovina

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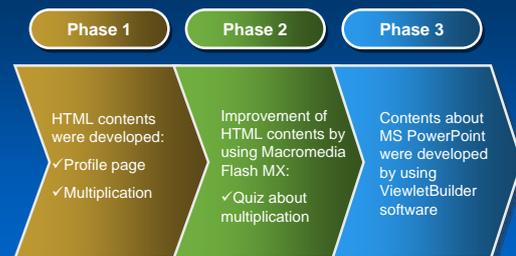
## Objectives

- The objectives of this presentation is to report about:
  - developed e-learning contents,
  - their implementation in a school of B&H,
  - the potentiality of *ViewletBuilder* and *Moodle* management system which are utilized for contents development and publishing.

## Background and purposes

- My work is based on:
  - the contents about MS Word and MS Excel developed in the last year program
  - reform processes ongoing in B&H and the curriculum changes
  - ECDL certification which is increasingly in demand in B&H as standard for education and evaluation of computer's skills
- That is why I selected two topics: *Microsoft PowerPoint* and *Microsoft Access*.

## Progress Diagram



## Details of phase 1

- HTML contents were developed
  - [Profile page](#)
  - [Multiplication](#)
- Materials developed in this way are very limited:
  - Static pages
  - No interactivity
  - Looks like a textbook



## Details of phase 2

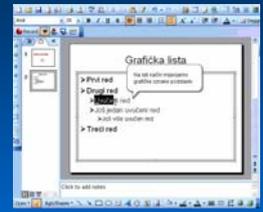
- HTML contents were improved by using Macromedia Flash MX 2004.
- Reasons because I used Macromedia Flash MX are that it can make a web site more:
  - attractive,
  - interactive, and
  - dynamic.
- The fact is that Flash is a flexible software package that can be programmed by ActionScript to run:
  - comprehensive applications
  - games,
  - quizzes,
  - and online multimedia movies.
- [Interactive quiz for multiplication](#)

### Details of phase 3

- The contents developed are on the use of software *Microsoft PowerPoint*.
- They consist of twenty six topics divided into ten lessons.
- Each lesson has three types of contents:
  - *Static lesson organized like textbook*
  - *Demonstrative lessons*
  - *Interactive lessons*
- In developing contents we used the software *ViewletBuilder*
- Developed contents were published through *Moodle* management system

### Developed contents

- *Demonstrative lessons* show dynamically what is described in static lesson with some tips.
- They are designed for absolute computer beginners and describe step-by-step for work in PowerPoint.
- Interactive lesson consists of simple tasks which ask students to click on the proper place so that the tasks could be accomplished. Depending on student's action, feedback will be given.



### Potentiality of ViewletBuilder

- ViewletBuilder is a main tool to create compelling, animated online presentations, demonstrations and software tutorials.
- This choice is due to its easiness to create and visually compile animated Flash demos which are appropriate for online software training.

### LMS - Moodle

- *Moodle* is a learning management system (LMS) – a free, Open Source software package designed to help educators create effective online learning communities.
- It is the most popular LMS on the web nowadays and it has a large and diverse user community with 12,165 registered sites in 155 countries with 4,021,531 users in 376,565 courses (as of May 30, 2006)
- Using Moodle learning management system gives us a good feedback of how each student accesses the contents.

### Moodle benefits

- Each user requires only one account for the whole server.



- Each account can have different accesses such as Student, Teacher with or without Editing Permissions, Course Creator and Administrator.
- Students can access a Moodle course using almost any browser, including Internet Explorer, Mozilla, Firefox, and Safari.

### Moodle benefits

- *Moodle* has a simple, efficient, low-tech browser interface and it is suitable for online classes as well as supplementing face-to-face learning.
- Its advantages includes:
  - *self-pacing* and gives students a chance to speed up or slow down as necessary
  - *interactivity* engages users, pushing them rather than pulling them through training
  - *automated test* questions can provides instant feedback to the both students and teachers.

## ***Implementation***

- Moodle was used to conduct experiments with Bosnia and Herzegovina's students.
- We have organized experiments for the objective to implement developed contents in high school of B&H.
- The particularity of these experiments is that the contents developed in Japan are used in the class of B&H with collaboration of B&H's teachers.
- The schools in which experiments were conducted are Electrotechnical High School in

## ***Conclusion***

- The combination of *ViewletBuilder* and *Moodle* allows us to develop e-learning contents which are more self-pacing for students and have more interactivity.
- With our contents, we hope to bring a modern and refreshing approach to informatics teaching for B&H's students.
- We believe that the approach combined with traditional one can improve students' interest and knowledge in informatics.

***Thank you for your attention!!!***

**Thanks to JICA and CRICED!!!**