Mobile Learning Systems

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Agenda

- Introduction
- E-learning
- Growing role of gadgets
- M-learning
- Our proposal
- Conclusions
- Questions
Introduction

- Growth of influence of mobile technologies
  - Smartphones, tablets
- Importance of usage of new technologies in education
- Need some extra effort from professors and teachers
E-learning

- New opportunities for a lot of people all over the world
  - Any place
  - Any time
  - Less resource consumption
- Various applications:
  - University studies
  - Training programs in commercial companies
- Drawback: Not equal efficiency in different areas of studies
Growing role of gadgets

- Consumer interest in tablets and smartphones is actively growing, and to laptops is falling.
- In Russia, the audience of mobile Internet users increases 2 times faster than the audience of regular Internet users.

Figure 1. Comparative analysis of the use of applications and browsers, in minutes.
Growing role of gadgets (cont.)

Figure 2. The most popular categories of mobile applications. USA.
M-learning

- Learning process is organized with the usage of mobile devices
- The forecasted revenue is about $14 billion by 2014
- Why do we need it?
  - Usability and convenience
  - Interest of the audience
  - On the edge of the technical progress
M-learning (cont.)

Figure 3. Big Gains on Going Mobile, percentage of campuses that have deployed mobile apps, fall 2010 vs fall 2011[2]
Our proposal

- Idea: one server — several client implementations

Figure 4. The organization of the system
Our proposal (cont.)

- Role-based system: students, professors, administrators

Figure 5. The hierarchy of roles in the system.
# Our proposal (cont.)

<table>
<thead>
<tr>
<th>Role\Application</th>
<th>PC Application</th>
<th>Mobile applicaiton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors, teachers</td>
<td>Module for creating e-learning course; Module for creating tests, including the ability to automate test scoring; Statistics module.</td>
<td>Statistics; Notification system.</td>
</tr>
<tr>
<td>Students</td>
<td>Catalog of courses; Module for studying; Module for sending homework; Module to perform control tests; Module to view the results of their performance.</td>
<td>Module for studying; Module to perform control tests; Module to view the results of their performance. Notification system.</td>
</tr>
<tr>
<td>Administrators</td>
<td>Registration; Control; Technical support.</td>
<td>Technical support.</td>
</tr>
</tbody>
</table>
New modules

- The main goal is to make the application useful for the audience
- Additional modules:
  - Monitoring, statistics, notifications
  - System of preliminary control for homeworks and assignments
  - Evaluation system (feedback)
    - Professor evaluation
    - Course evaluation
Key principles

- Divide the functionality
  - Based on the role the set of features for each client application is defined
- New modules
- Clients:
  - Desktop application
  - Mobile application
  - Web-based application
Conclusions

- Mobile technologies became an essential part of our lives.
- We will increase the effectiveness of education if we use them.
- We propose an efficient approach of using different technologies in one e-learning system (PC, mobile, web).
References

- etc.
Thank you!
Questions?