Features and tools provided by the three most commonly used systems at the top 200 universities

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1. Summary
The main objective is to find and compare features and tools provided by the three most commonly used systems at the top 200 universities and colleges, according to the assessment of the quality system ARWU. The main research was:

- To find the frequency of using the open source and commercial e-learning systems and determine which system has the largest ratio on the market within the top rated universities according to the evaluation system ARWU.
- To find out the use of various instruments.
- To compare features and tools provided by the three most commonly used systems at the top 200 universities.

When analyzing the use of e-learning system we relied on the information provided at the university websites. In analyse of using the e-learning systems and its parts and perception of e-learning system, we used a questionnaire survey, which was distributed between students of the selected best universities. Recent analysis was aimed to compare the three most widely used e-learning systems, where was analysed the functionality of these systems.

The most commonly used solution with a share of 45% is the Open Source solutions among which belong mainly Moodle, Sakai etc. Commercial systems present 40% from among the 200 best universities of the world and the most common representative is BlackBoard.

2. ANALYSIS OF THE E-LEARNING SYSTEM USAGE
Individual e-learning systems have different structure and provide different range of services. The most commonly used LMS systems are Blackboard, Moodle, Sakai, and Ilias. Our own research proves that. Individual solutions are provided in various versions. In poster we will show the percentage of each system usage.

3. SYSTEM COMPARISON
In comparison, we included three most used systems based on the analysis focused on the use of e-learning systems at the top 200 universities on the basis of the questionnaire survey, namely: BlackBoard, Moodle and Sakai. These systems are respectively compared according baseline indicators. In the poster we will compare them according the supported standards, types of operating system of the server that may be installed on, and the used of programming languages, support of mobile applications, and responsive website design of LMS. Also, we compare individual characteristics in terms of content features, course design, administrative tools and communication tools.

Overall we can evaluate Moodle as an e-learning tool providing the widest opportunities within e-learning, after an overall assessment of tools and features. Figure 1 shows the total number of tools and features that we compared and Moodle achieved the best results. In addition to these comparisons,
we compared also the home pages of particular e-learning systems, but this comparison is not part of this article due to its extension.

Figure 1: Total number of instruments (Source: Author)

4. MAJOR CONCLUSION
The analyses show that the e-learning system usage is already a common part of the education and the top rated universities prefer commercial e-learning systems and are willing to pay fees for the provision of the licenses.

This paper will help universities in the selection of e-learning system, and will also help in the issue of which instruments within the e-learning system should universities use to the fullest possible use of the e-learning system potential.

5. REFERENCES
GREEN K. C.. Campus IT Officers Affirm the Instructional Integration of IT as Their Top Priority, Offer Mixed Reviews on IT Effectiveness and Outsourcing for Online Education. Encino. The Campus Computing Project, 2013. 35 s.

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