

M-education influence on the content of professional training courses for future it specialists

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Abstract. In the near future more users would connect to the Internet via mobile devices than desktop PCs. Mobile statistics convinces stakeholders about the importance of mobile learning. Analysis of educational environments of the leading world universities shows that direction of their efforts is building of intelligent tutoring systems

Keywords: modern learning, mobile learning, m-learning tools, web-services

Introduction. Here we are today in the middle of the biggest computing revolution. In the near future more users would connect to the Internet via mobile devices than desktop PCs. Mobile statistics convinces stakeholders about the importance of mobile learning.

Objective: Determine the direction of development of modern interactive m-learning systems to justify the components and approaches for their further practical implementation

Here are main key sources for m-learning: internet growth, mobile revolution, a strong affinity for mobile, re-imagine of approaches, wearable computing. Today we must create mobile-learning apps, which learners will use to access our learning thru any devices, because with 1.5 billion smartphone users worldwide and counting, mobile web traffic now accounts for 15% and is growing 1.5x per year. Mobile users are engaged and the platform represents an opportunity for delivering great. Smartphone users feel connected, excited, curious, interested and productive. We check our smartphones an average 150 times per day. We enjoy the simplicity of mobile. We need to re-imagine how we will design learning for multiple screens and not just e-Learning for the traditional desktop and laptop.

There are now 2.4 Billion global Internet users, which is a few percent a year over year growth. It's worth noting that many of these internet users are not only accessing the web using their mobile phones, but in many cases this is their only way to access the web. In other words, these people have no access to a traditional desktop computer. It's also worth noting that in China, mobile internet access has already surpassed that of accessing the web using a traditional desktop PC.

Telecommunications system in Ukraine continues to grow rapidly, demonstrating sustainable development. The level of saturation of mobile communications in Ukraine has long ago exceeded 120%. There are several reasons that encourage universities to attract mobile technology into the learning process:

- A high level of penetration of dynamics and technologies in our life.
- The current legal framework.

According to the State Statistics Service of Ukraine [1], during the last decade, there was a high dynamics of growth in the number of Internet users and mobile subscribers (Fig. 1 and Fig. 2).

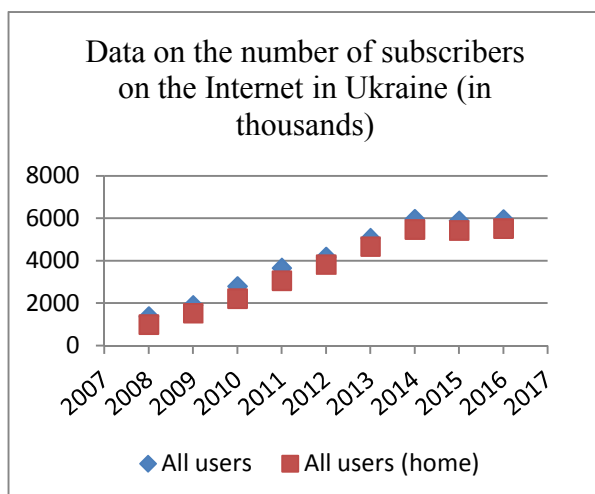


Fig. 1. Internet users in Ukraine

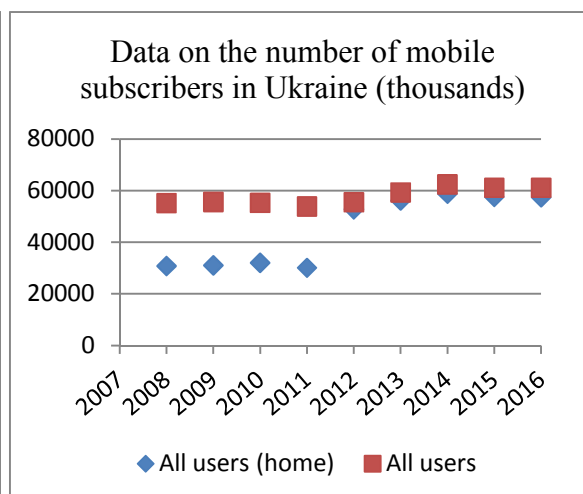


Fig. 2. Mobile users in Ukraine

It's worth, that in Ukraine is growing interest in mobile learning, but in most cases, mobile technology is considered as a communication tool for participants in the educational process. In Ukraine university degree of integration of mobile technology into the learning process

remains marginal. Usually, local universities do not have mobile versions portals; characterized by a lack of adaptation of information services for mobile users; not created modern electronic educational content formats; and students and teachers are hard to find mobile

applications that solve the problem of self-study. The development of online applications and online trading will stimulate the development of educational web-services. Consequently teachers will preview content subjects, especially those that contain elements of training of future specialists in IT technologies.

Apposite trends in mobile learning:

- HTML5 has become the smarter and faster way to render engaging content such as animations and videos your a whole range of mobile devices.

- The rise of the BYOD trend calls for a design approach that can cater to a variety of devices at the workplace and device agnostic content is the answer to it.

- Analytics playing a bigger role in understanding learners' interaction and behavior with mobile based courses, such as by monitoring app traffic and visualizing page-flows.

- A GfK study confirmed in 2014 that shuffling between multiple screens has become a norm. The same is true for mobile learning as both smartphones and tablets become an inseparable part of our lives.

- There is a greater shift towards keeping content responsive, i. e. adjustable to different screen sizes to provide consistency in the quality of learning experiences because of the multi-screen usage trend.

- There is an escalating trend of mobile videos and simulators being used for professional competency building, such as in healthcare and manufacturing industries.

- Gamification on the mobile is fun, engaging and convenient, and provides an easy method to teach abstract concepts such as team building and decision making.

- Learning design that is based on Social, Mobile, Real-Time Learning and Geo Location can create authentic, personalized and context aware learning models where in learners can have real-time dashboards to monitor their progress and access to the right content or experts based on geo-location.

- Mobiles are being projected as the ultimate medium for just-in-time support which should come in easily digestible and immediately useful information "nuggets".

- Brainstorming discussions, events and groups on Facebook or a specially created social mobile platform are rapidly changing how employees interact with each other to share knowledge and drive innovations.

- Mobile apps that superimpose digital information on mobile or tablet screen that captures an object using the camera, have already been developed.

- Be it for monitoring health, finding directions or connecting with people, there is a lot of activity in the wearable technology segment. As wearables shift from becoming more of a need than a luxury, we can expect to see them being used actively for learning.

Wearable computing is emerging as the type of significant technology shift that will drive innovation in the way personal computing did in the 1980s or mobile computing and tablets are doing currently. How many times we reach for our smartphones every single day, it only makes sense that wearable technology, such as Google Glass, will be something we will embrace next. For a while now we have been talking about designing for the 'unknown.' In other words there's a need to design learning that is responsive and adaptable enough to flow freely across multiple screen, and now is clear that these wearable gadgets will play an important role moving forward.

Conclusion: All of viewed statistics are compelling. A massive shift toward mobile computing is happening and it means that developing learning only for the desktop computer and laptop is no longer an option. Mobiles are much expanded and it's time to get serious about mobile learning. Now we must precede move towards adjusting curriculums primarily for future IT-professionals and development of new interactive teaching methods with the inclusion of elements of gamification.

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