MASARYKOVA UNIVERZITA

M-learning

New environment

▷ Dynamics of society evolution – nonlinear character

- change of way of thinking

- impinge into educational area

▷ How to choose knowledge important to pass on to young generation?

▷ new professions arise, old professions inconspicuously disappear

▷ we will not spent all life in one job

Massification of education

- ▣ longlife learning
- ▣ massification and democratization of higher education
- ▣ people already working – combined, distance or lifelong learning

New technologies

- technologies implemented into everyday life of society:
- expect new knowledge and skills
- bring new way how to access knowledge
- influence way of thinking
- offer new tools of interpretation of study materials
- strengthen critical thinking
- improve ability to solve problems connected with work and everyday life
- support communication:
- ability to learn to argue - on-line discussions
- sharing of knowledge and attitudes
- team cooperation
- space for self-reliance and independence

Seamless Learning Culture

- seamless learning culture supports:
- shaping of learning community
- feeling of affiliation to educational institution
- environment promoting collaboration and holistic development of students
- breaking dividing line in student thinking, distinguishing between "them and us" in relation to teachers
- involvement into meaningfull activities during lectures as well as outside of school

Types of learning

- **C-learning** (conventional learning in classrooms with equipment provided by bricks buildings
- **E-learning** - integration of information and communication technologies in process of creation, communication and management of educational forms and content and their sharing among students and teachers as part of learning and autonomous learning process
- not absolutely anytime, anywhere
- **M-learning** refer to „*any form of learning using mobile devices*"
- handheld device: mobil phone; MP3 recorder; iPod; USB flash disk; handheld videogames; PDA; E-book reader; Smartphone; Laptop/notebook, Tablet PC - UMPC (Ultra-Mobile PC, Microsoft) and iPad (Apple)

Types of learning

- **U-learning** – broader platform for learning than m-learningu. It places m-learning in context aware environment

- learning form which use mobile devices in interaction with ubiquitous computing technology deployed in surrounding environment

- MEMS (Micro Electro-Mechanical Systems), RFID (Radio Frequency Identification) tags, interactive boards, GPS and other technologies equipped with sensors and effectors

Knowledges of teachers

- **technological knowledge** – about affordable and usable devices

- **pedagogical content knowledge** - enable transform knowledge of subject content into form satisfying educational needs of students

- example: without pedagogical content knowledge are technologies implemented in education without reflection of their impact on learning style

- mobile technologies used for messages and educational content delivery. Mobilizing and motivational potential is not utilized

Types of learning

- construction of knowledge x passive intake
- contextualization and integration through authentic tasks
- m-learning support several types of learning
- **problem-based learning** - students cooperating in teams seek solving of offered problems
- stage of autoregulatory learning, mutual evaluation a reflection of acquired knowledge, *experimental learning*
- **collaborative learning** - individuals learn in mutual interaction and cooperation to share knowledge and skills including social skills
- **action learning -** investigation and solving of problems in context of practical actions od students
- **authentic learning** – learning of activities which will students likely encounter in their professional life
- **situated learning** - emphasis on culture of community of professional, enculturation process

M-learning approaches

- **prosocial:** placement of activities in social environment of students, it uses existing social relationship among members of group
- **authentic** and meaningful: in physical environment where real events take place and real people solve particular problems, meaningful context
- **open ended:** we allow open choice among multiple ways leading to solution of problems, not just one clear answer
- **intristincaly motivating:** in real world context - engagement of students escalate during fulfilling a task, attractiveness of new educational form grows
- **filled with feedback:** several types of feedback
  - from other members of group
  - from teacher
  - from virtual environment - own activities performed inside serve as basics
  - from real environment – information collected from physical reality

Mobile educational games

- **traditional educational games –** drill and exercising of knowledge
- **thinking games** – for elementary and secondary school students
- **serious games** – training of skills required for job performance
- **locative games** - GPS information from satellite, use augmented reality in environment authentically framing adoption of required skills (education for truants)
- **alternate reality games** – solving of puzzle or mystery, played in real world they transcend beyond to cyberspace where keys to solution of tasks hidden lie

Learning 2.0

- **informal education –** education designer creates conditions for spontaneous sharing and transfer of knowledge among students and theirs social environment

- learning swarms - emergent trend of interactions among students

- enthusiastic students create digital and educational objects, tag digital material, instigate debates, keep on hard questions and advice requests at teachers

- education motivated rather by pull of demand and requirement than by push of offer and supply

- learning 2.0 – use educational tools for exploration, experimentation and discussion engagement. Education based on enthusiasm , openness and active participation

Examples: Creation of digital storytelling

⊡ students create short film episode about authentic activity (example. analysis of risk, medical procedure, oriental massage..)

⊡ film is composed from story and record in form of edited pictures, photos, video and audio. The result is shared among schoolmates on social networks

Examples: Creation of video motion

⊡ for students of education science and teachers

⊡ students works with class where their training take place to create short educational video episode

⊡ during course they discus and share curriculum plans, ways how they use mobile devices and records of joint discussions

⊡ in the end they prepare presentation which reflect creation of educational episode and replenish it with records of theirs students outputs

⊡

Examples: Recording audio interview

- for university students – recording of student's discussions about scholarly texts, records are shared with other students in course and their reactions are acquired
- Pedagogical content processing of complex concept in visual form
- Mathematic – using pictures, sounds, video and text analysis approaches to master material taught, ex. division

Examples: Preparation of an experiential educational excursion

▢ students of the visual art course design podcasts or videocasts, guiding other students through local architecture or exhibitions. The resulting iPod presentation captures conversations with curators, photos, scanned images, audio clips, comments, as well as game elements in which other students solve different tasks

M-learning in libraries

▸ m-course management systém

▸ mobile digital librarianship - e-book research and an accurate description of digital content

▸ staff directories, libraries, databases, magazines, electronic books and electronic resources are made available

▸ videos about the library, its opening hours, news and planned events or exhibitions, collections or services

▸ book attendance at a seminar or forum, or use referral support via SMS, email and instant messaging