Supported learning approaches in engineering

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The *spoken* word and the *text* written on a piece of paper were basically the only ways to transfer information from one person to another for about 2,300 years.
With an increasing pace, innovations such as radio, cinema, television and finally computers significantly changed the way how communication and information transfer worked only over the past 30 years.
The format of knowledge transfer remained the same as 250 years ago when the first university for engineering was founded.
Computer Aided Design and Modelling (CAD and CAM) have been part of the engineering design already for a long time.
With the growing importance of the Internet, education is not nowadays bound to a specific location.
To bring new solutions and innovations, it is necessary to **rebuild** the existing educational process.

From the teacher’s point of view, it consists of:

- process of **teaching**,
- process of study **materials** preparing,
- process of **examination**.
In applying ICT for a specific task, it is necessary to be aware of certain requirements, which might define the limit of possible applications. There is always a possibility that many of teachers will not accept the new requirements of technical, individual or comprehensive nature.
A new way of thinking is required for all players in the new value chain. Otherwise, it is very probable that they will try to prevent the changes. Based on that, my university has prepared a new status in which new tasks have been reflected and given by the e-education.
Modern ICT can assist teachers to spend less time in preparation of teaching material sharing of content or automatic processing and enable them to incorporate all sorts of multimedia within their presentations. Time might be more efficiently used if parts of the educational content can be used in self-guided or tutored e-learning activity. Electronic assessment tools allow better estimation of students’ knowledge skills during certain stages of the course program.
Informačný systém VZDELÁVANIE

Hodnotenie predmetov

Student, využívajte možnosť hodnotenia predmetov, ktoré ste absolvovali. Príspevky sa tiež na skraštenie výučby. Formulári na hodnotenie predmetu je možné naťažiť kliknutím na ikonu.

19.01.2006 10:46

Upozornenie - používateľské účty studentov

Studenti, ktorí studujú na viacerých fakultách, si môžu vybrať požadovanú fakultu po kliknutí na link (osebné číslo) umiestnený za svojim menom.

25.10.2005 10:08
However, there is some gap between the students and teachers expertise. That might be explained by the difference in age. Due to the acceleration of innovations in new technologies, this deficiency will probably increase. In many cases the students’ expertise is set at a quite high level.
It is evident that new developments modify learning process from teacher-centred to student-centred learning.
In general, the users of the e-education technological systems are teachers, students and administrative staff. Their priority and perspectives are evidently different, and it seems to be a never-ending story to find a consensus. Thus, it is not obviously possible to implement all aspects of the e-education immediately at university as whole.
Since the University of Zilina already possess some experience based on continuous examples of good practice, our suggestion is to stepwise move to a higher level by suitable building blocks. A major difficulty for the application of modern technology can be the financial aspect in terms of costs of development, purchase, training and maintenance.
Hence, Learning Management System Moodle as “open source” presently creates the base of the e-education system at the university. But building up the new organisation culture is a long-term task. Now we might speak eventhoughn about e-university. Full system is accessible on http://vzdelavanie.utc.sk
However, e-education means a full range of others tools contributing to engineering education and training. Students begin to use more general methodology to the implementation of the electronic system of education services.
The **electronic mail system** is used to compose, send, and receive messages utilising electronic communication systems and to resemble the most common form of internet based communication.
Online forums are derived from newsgroups to enable the exchange of ideas and messages. Forums are often used by online communities in order to discuss topics in public or among selected users.
Instant messaging is the fact that conversations taking place in real time.
Voice Over IP
and web conferencing services
The chatroom
is an online forum offering the possibility
to broadcast message exchange online in real time.
Chatroom sessions are moderated
and structured depending
on different administrative user rights.
Webcasting describes the internet based transmission of lectures or practical exercises. Since the telecommunication based video-conferencing was bound to high costs and special technical equipment, recently webcasting is used to record video conferences and training material.
Zoznam archivovaných prednášok

Vysielané akcie zo ŽU

► Ako sa oslobadzujú kvarky
   Daniel Tomášik

► O vede skutočnej a vede populárnej
   doc. RNDr. Martin Múžič, PhD., FMFI UK Bratislava

► New chemical processes for Si devices: nitric acid oxidation and defect passivation using cyanide solutions
   Prof. Mikaru Kobayashi z Osaka Univerzity

► M-teória: história vzniku a súčasný stav
   Prednáška obsahuje historický prehľad vývoja m-teórie (teórie strúň) s dôrazom na jasné formulovanie fyzikalných základov tejto teóreie bez použitia matematického aparátu.
   Prednášajúci RNDr. Tomáš Bležak, PhD., FMFI UK Bratislava

► Einstein a Slovensko.
   Prednášajúci doc. RNDr. Juraj Štefanka, CSc, FMFI UK Bratislava

Akademické informačné dni
Databases
are a collection of facts, or pieces of knowledge, which can be managed, evaluated and searched using a database management system.
Search Engines
as software tools were developed
to find certain information stored
on a computer system.
The search engine allows
to ask for content meeting specific criteria
and retrieving a list of matching references.
Content Catalogues support the exchange of content or educational material. Conditions of exchanges can be set by the users in order to document access or to enable collaborative work and eventually to charge the use of the content.
Galleries
are image data banks usually allowing
the user to browse or search a graphic
or document website with reduced images
in order to view multiple images
on a screen simultaneously
or to download such images more rapidly.
Physical or virtual simulation can generate a virtual environment incorporating a certain degree of physical or economical relations. It allows guided experiments to learn about attributes in engineering education.
Gaming is a simulation incorporated in a competitive situation in order to motivate the student.
Blogger
basically are common web pages often used as online live journals. Project work can be directly published allowing a direct feedback. Numerous educational experts routinely publish their personal explorations in blogs.
Wiki-systems
are based on open-source software allowing
the creation of encyclopaedias
on defined terms
by enabling easy editing,
linkage and discussion by open source
or restricted authors.
Žilinská univerzita v Žiline

(Presmerované z Žilinská univerzita)


História

V historii školy bola univerzita viackrát promenovaná a prestavaná z miesta vzniku v Prahe do Žiliny.

Vysoká škola železniční v Praze (VŠŽ) vznikla 1. oktobra 1953 vyčleněním z Českého vysokého učení technického. Na začátku mala 4 fakulty.

Žilinská univerzita, nová budova rektorátu
Assessment tools in ICT are software devices to document or measure knowledge, skills, attitudes and beliefs.
Thank for Your attention