

Educational Technology



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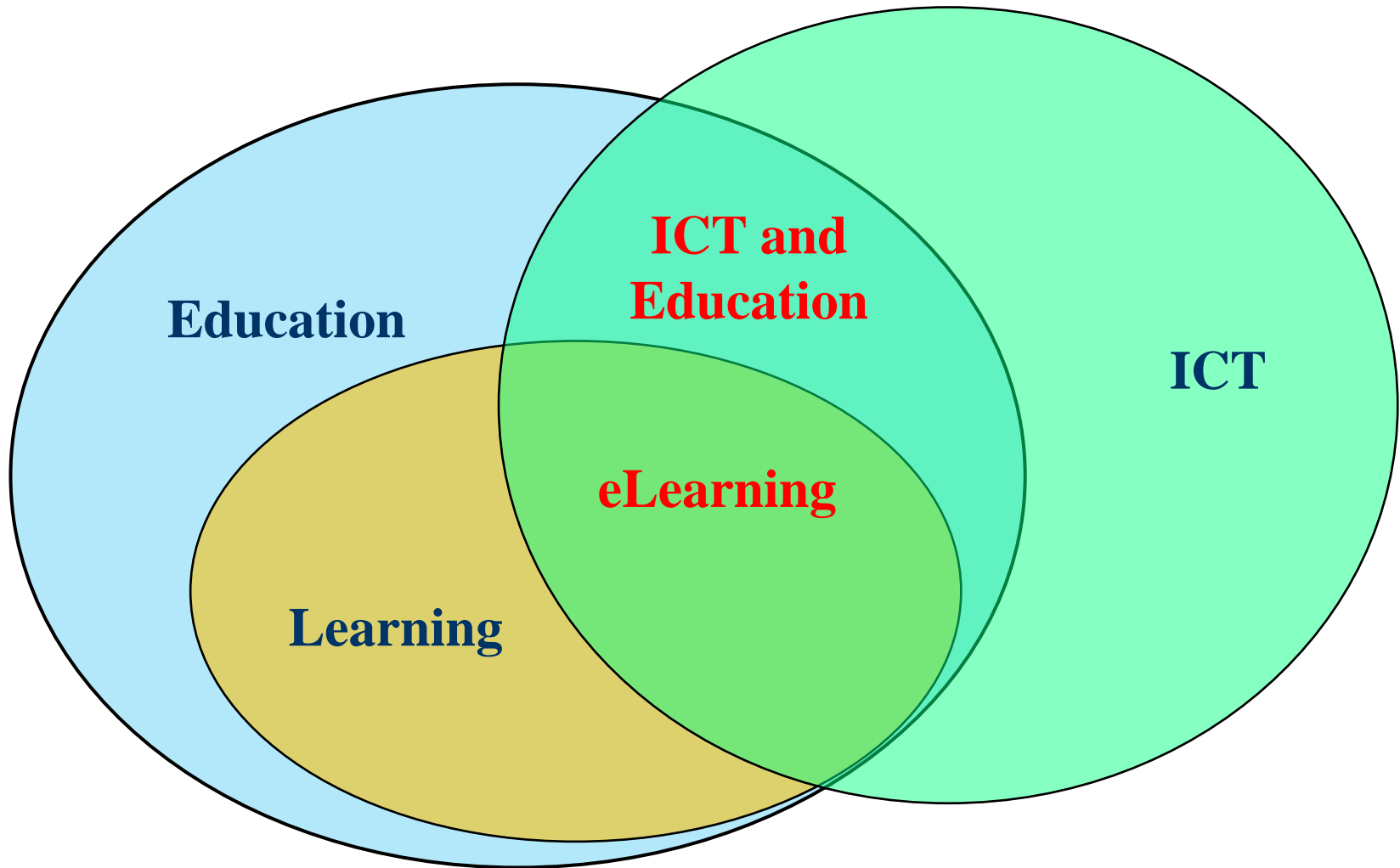
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Educational technology

- Considering:
 - today's advanced digital technology and
 - existence of learners with adequate digital literacy
- Educational organizations should be able to:
 - facilitate learning through technology,
 - promote ICT applications in education and
 - support more efficiently eLearning.
- This at least means:
 - instructors with sufficient literacy on ICTs,
 - emergent didactic methods based on new learning theories

Education / learning / eLearning / ICT



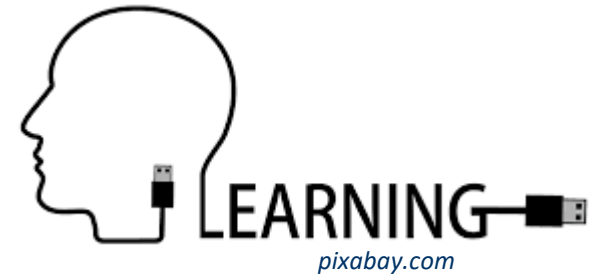
Transforming education



flickr.com



<http://torgroup.org/theory-of-reality/the-scientific-evidence/>



Learning / eLearning

Old times...



Learning

No eLearning

Learning / eLearning

A few years ago...

eLearning

Learning

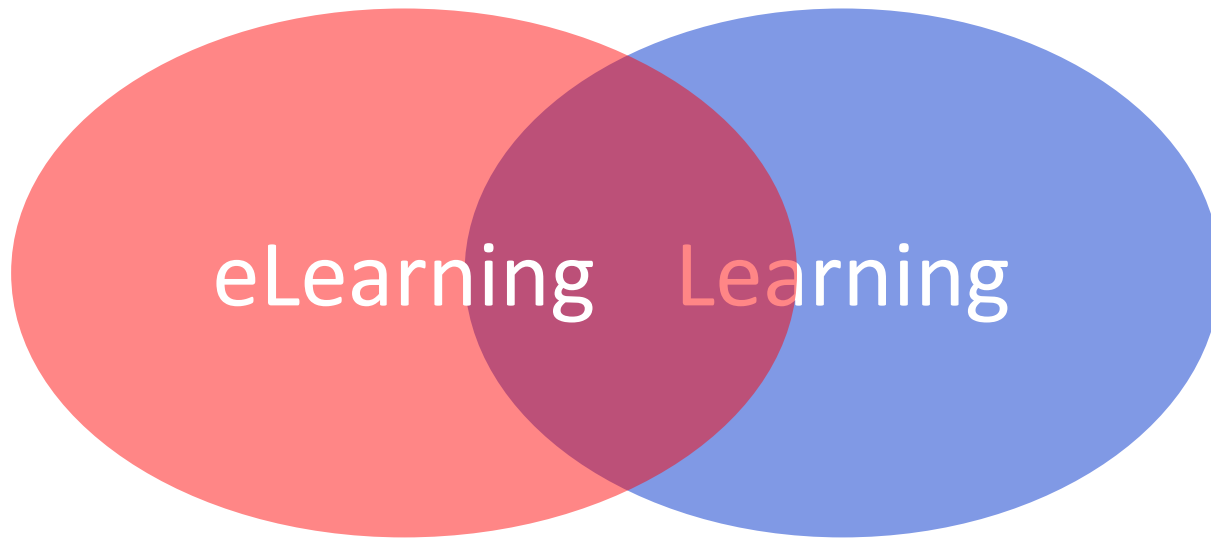
In parallel

No eLearning



Learning / eLearning

Today...



complementary

Blended Learning

Learning / eLearning

Soon... (if not already)

Learning
=
eLearning

eLearning 2.0,
eLearning 3.0?

Related terms

Computer Based Learning

Technology Based Training

Computer Based Instruction

Computer Based Training

Computer Managed Instruction

Hybrid Learning

Blended learning

Synchronous Teaching

Web Based Training

Open learning

educational technology

Web Learning

Asynchronous Teaching

Technology Enhanced Learning

Distance Education

Distance Learning

Adaptive learning

Ubiquitous learning

Virtual learning

Online learning

Mobile learning

Game Based Learning

Project Based Learning

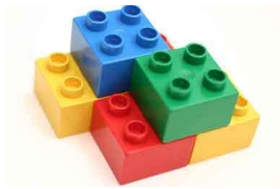
Open Education

Scenario Based Learning

Digital Education



ICT's outcomes concerning learning



OPEN EDUCATIONAL
RESOURCES

PLN

M O O C
MASSIVE OPEN ONLINE COURSE

**Personal Learning
Environments
(PLEs)**



Learning Analytics

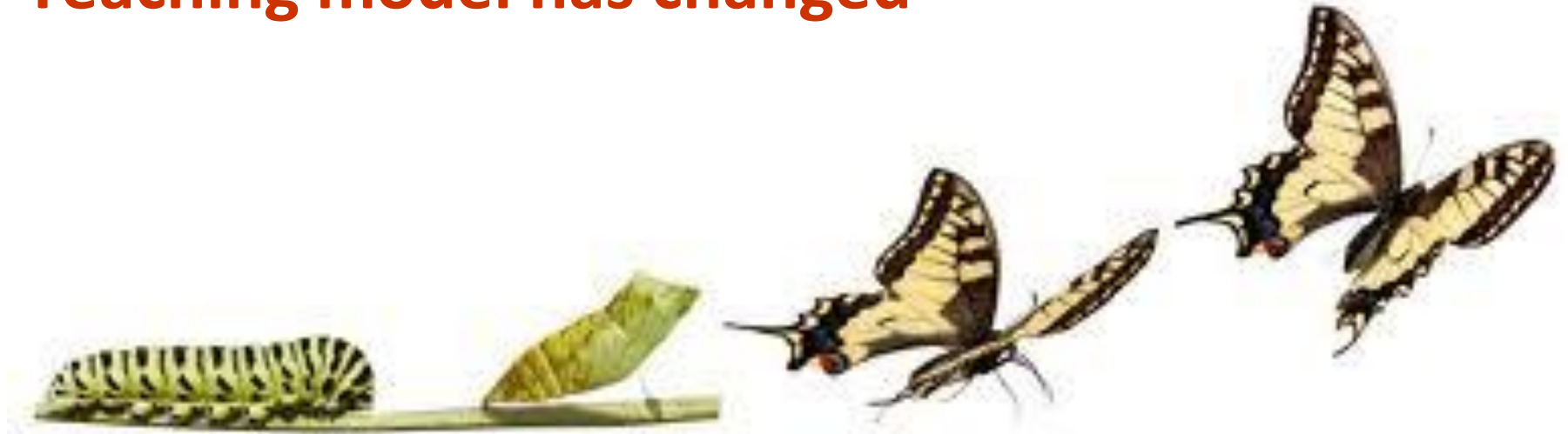
Student ePortfolios

What does all these mean?

- For the learners?
- For the instructors?
- Educational systems?
- For the classrooms?
- For schools?
- For universities?
- For companies?
- For states?
- For people?
- For societies?



Teaching model has changed



From teacher-centered model

to

learner-centered model



New roles

- What about student's new role?
- What about teacher's new role?

EDUCATION



E-LEARNING



creative-commons-images.com



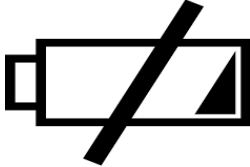
Using technology: biggest fears of a teacher...

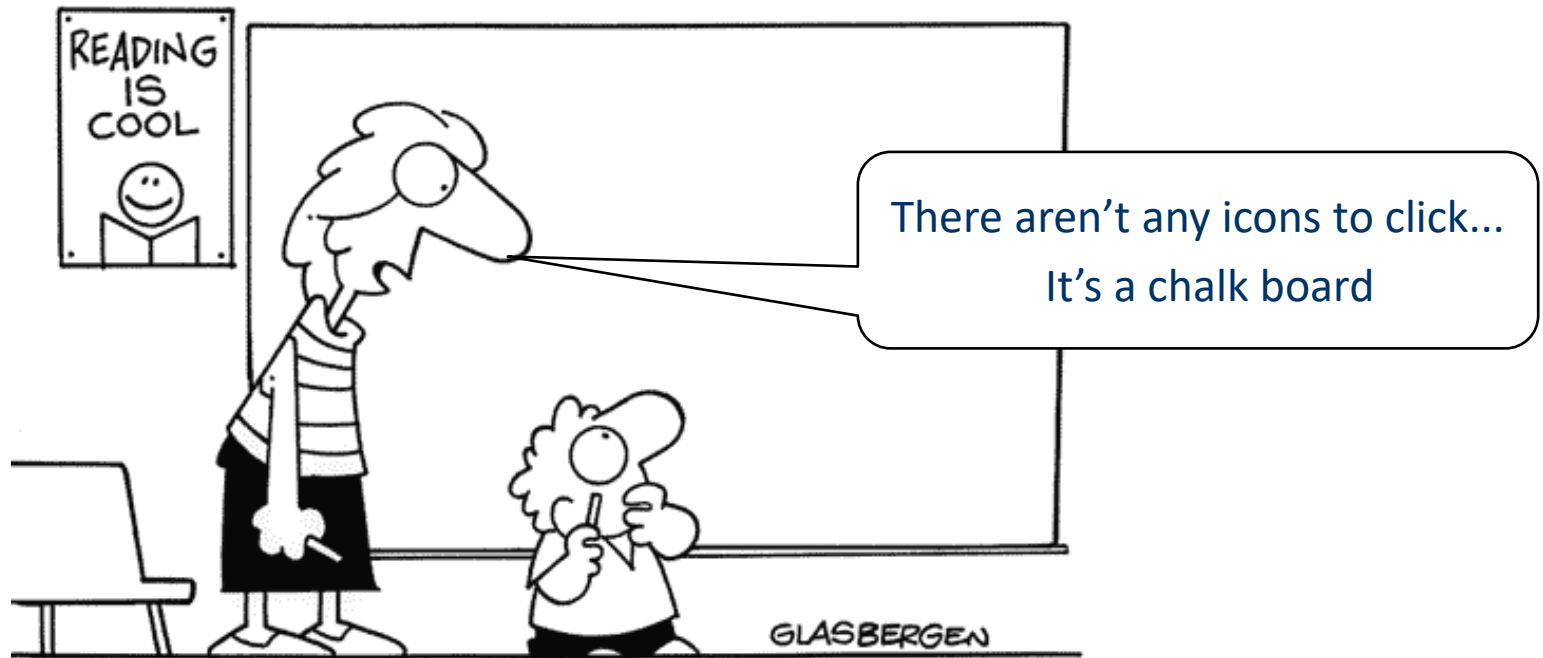
- How do I make this?
- How do I avoid looking like an idiot?
- They will know more about this than I do.



Copyright 2003 Randy Glasbergen. www.glasbergen.com

Using technology: biggest fears of a student..

- Do I have signal? 
- Downloading... How fast? 
- Enough battery? 



What about instructor's role?

- Duties, apart from teaching:
 - Educational planning
 - Educational material
 - Educational technology
- ICTs support all these today
- Almost everything is eLearning



Instructor's role is changing...

shifting from

form foreground
(actor)



to background
(director)



Instructor's role is changing...

- From actor to:
 - designer
 - producer
 - director



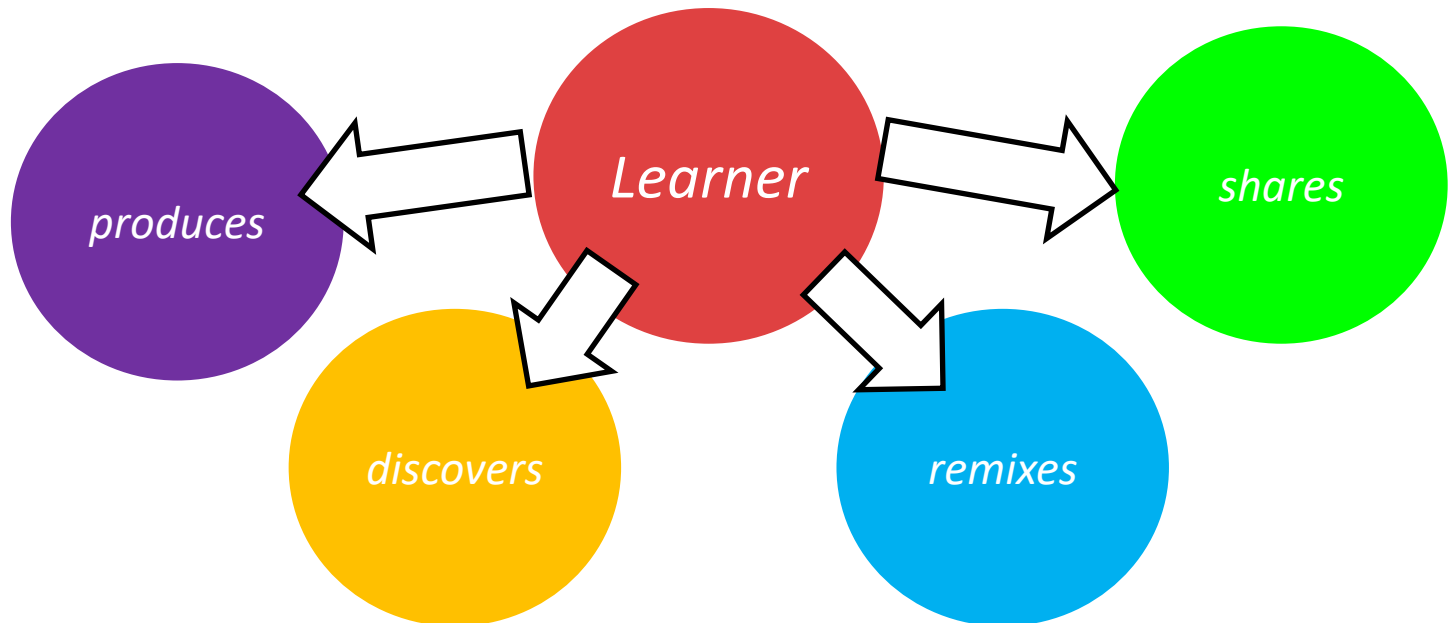
pxhere.com

What about student's role?



Student's role have already changed!

- Not just a content consumer.
- Discovers, shares, reuses, redistributes, revises, remixes...
- Not a passive content recipient anymore.
- An active content creator.





The stimuli have been changed!


discovers

produces

shares

develops

Learning has been changed



The new generation already has
experiences of new ways of
learning!

discovers

produces

shares

develops

The mode of delivering learning
should be changed

And the form of the classroom changes...

Old times...



Classrooms have been changed...

Now...



What about the future classroom?



Education should be changed

- Students are ready:
 - They are digital natives.
- Teaching should be adapted:
 - New delivery methods.
 - New learning theories.
- Need for training educators:
 - In any educational level (instructors of kindergarten, primary schools, high schools and universities, any kind of trainers etc.)
- Educational system should be changed:
 - New curricula,
 - New syllabuses, new educational activities

Digital educational platforms



OPEN EDUCATIONAL RESOURCES

**Personal Learning
Environments
(PLEs)**



MOOC

Digital educational content

- Not static
- It is taking the place of instructor!
- Classroom without instructor's participation
- Accessible (open, with proper licenses)
- With interactivity
- Adaptable (personalization)
- Reusable
- With interoperability



en.wikipedia.org

Learning has been changed

- New opportunities
 - New ways of communication and interactions
 - Modern environments for teaching and managing the content
 - Upgraded educational material
- New learning theories
 - New teaching technics
 - New educational activities
 - New ways of assessment
 - Whiteout the presence of the instructor
 - Without spatial and time restriction
- New priorities
 - Learning by doing / making (constructivism)
 - Teach learners how to learn

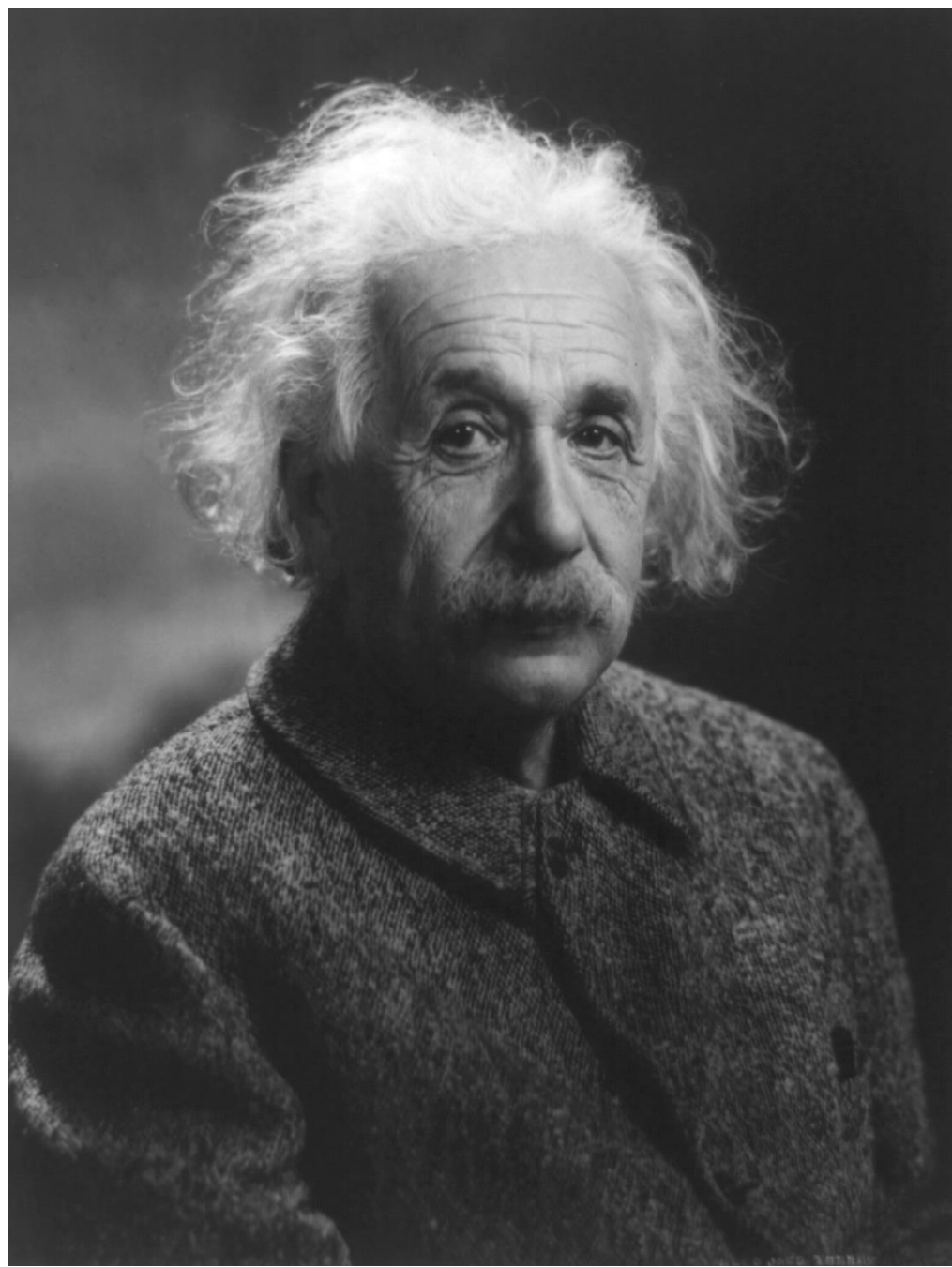


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***“I never teach
my students.***

***I only provide
the conditions in
which they can
learn”***

(Albert Einstein)



Course title & identity

- Title: *Educational Technology*

- Objectives:

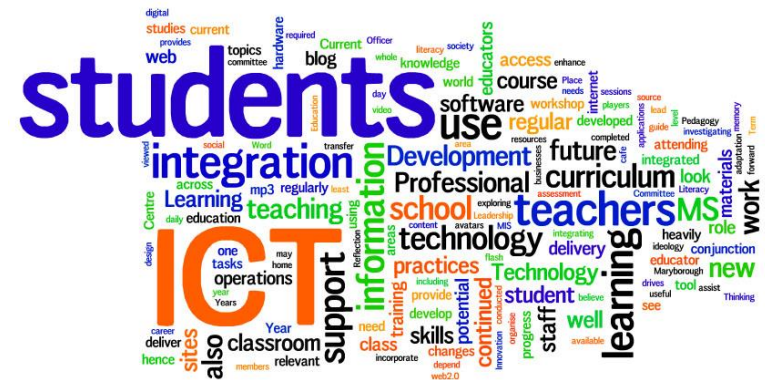
- *understanding how digital technology is used in education.*
- *acquiring an overall view of today's eLearning, considering the ease of use and effectiveness of the tools, services and infrastructures offered in the educational context.*

- Focus:

- *Applying computing, Information Systems*
- *Computer Science*

- Members of staff

- *K. Vassilakis (kostas@cs.hmu.gr)*
- *M. Kalogiannakis (mkalogiannakis@hmu.gr)*

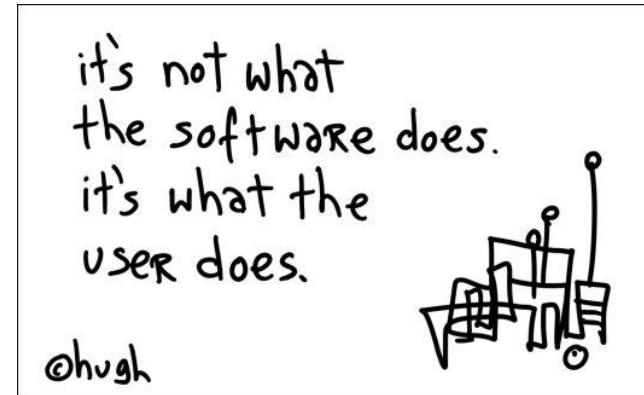


Syllabus

- Learning and teaching with the help of modern technology,
- Contemporary learning theories,
- Development of interactive educational material,
- eLearning infrastructures and online educational services are presented and discussed systematically,
- Standards and specifications in educational technology (related to interoperability, system management, content re-use, access and security).

Approach

- Three (3) hours lectures per week
- Some laboratory hours
 - *Student's Personal Statement (discussions)*
 - *Presentations (assignments, projects)*
- Assignments: 2 (*individual*)
- Project work: 1 (*teamwork*)
- Med-term assessment: YES
 - *On the ~5th week by the presentation of the 1st assignment.*
 - *On ~9th week by the presentation of the 2nd assignment.*
- Final assessment: YES
 - *Between 12th – 15th week. Concerns: Project's results.*



Specific details

■ Lecturing strategy

- *Instructor's lectures and pedagogical activities;*
- *Practice, discussions and project work.*



■ Learning Material

- *Lecture slides, book chapters, white papers, research papers, user manuals, selected web-sites (journals, blogs, repositories, initiatives, official educational agents, companies etc.).*
- *Most material is under open licenses (Creative Commons) & public domain resources.*
- *All material would be available online (Open eClass).*

■ Tools/technologies

- *Authoring & content packaging tools,*
- *eLearning systems (LMS, Web 2.0 applications etc.),*
- *various programming tools (js, XML,...).*

 creative commons



Assessment



- 1st assignment (25%)
 - *Individual, announced in 1st week, deadline ~5th week (presentation - discussion). Review on technologies used in educational process (~2500 words).*
- 2nd assignment (25%)
 - *Individual, announced in 5th week, deadline ~8-9th week (presentation - discussion). Review on eLearning topics s (~2500 words).*
- Personal statements (20%)
 - *Students' personal statements on various eLearning issues. Individual, announced periodically with deadlines at course's forum.*
- Project (30%)
 - *Teamwork (2-4 students), announced ~4th week, deadline by the end of the course (presentation-discussion). Technical report on an eLearning implementation (product, platform, service, system...)*

Expected outcomes

- be familiar with ICT tools, applications and services for education,
- obtain the ability to design and create educational material,
- be able to implement services (web-based) for education
- understand ICT supported teaching learning strategies,
- develop understanding of the ICT effects to learning, working life and society,
- make reasoned judgments about when and how to apply aspects of ICT to achieve maximum usefulness.



Applicant's profile

■ Pre-requisites

- *Undergraduate level background on informatics.*
- *Class attendance.*
- *Proficiency in English.*
- *Interest in the area.*
- *Willingness to learn (?)*



■ Skills

- *The course does not require special skills.*

■ Expected weekly workload

- *~10-11 hours (average workload including class attendance)*

Questions?



**“It’s called ‘reading’. It’s how people
install new software into their brains”**