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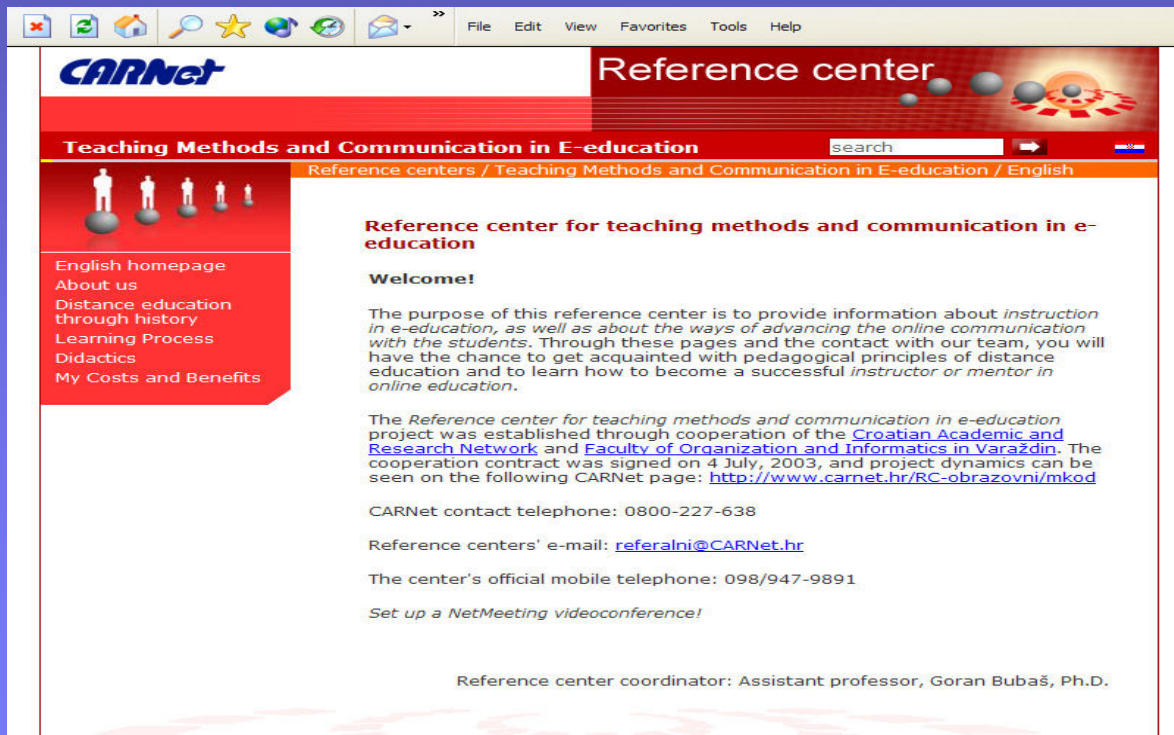
The Prospects for Blended Learning in Croatian Academic Institutions



Faculty of Organization and Informatics, Varaždin

Presentation supported by...

- ◆ Reference center for teaching methods and communication in e-education, *CARNet*



The screenshot shows a web browser window displaying the CARNet Reference Center website. The browser's address bar shows the URL <http://www.carnet.hr/RC-obrazovni/mkod>. The website has a red header with the CARNet logo and the text "Reference center" and "Teaching Methods and Communication in E-education". A search bar is visible in the header. The main content area features a red sidebar with navigation links: "English homepage", "About us", "Distance education through history", "Learning Process", "Didactics", and "My Costs and Benefits". The main text area contains a welcome message and information about the center's purpose and contact details.

Reference center for teaching methods and communication in e-education

Welcome!

The purpose of this reference center is to provide information about *instruction in e-education, as well as about the ways of advancing the online communication with the students*. Through these pages and the contact with our team, you will have the chance to get acquainted with pedagogical principles of distance education and to learn how to become a successful *instructor or mentor in online education*.

The *Reference center for teaching methods and communication in e-education* project was established through cooperation of the [Croatian Academic and Research Network](#) and [Faculty of Organization and Informatics in Varaždin](#). The cooperation contract was signed on 4 July, 2003, and project dynamics can be seen on the following CARNet page: <http://www.carnet.hr/RC-obrazovni/mkod>

CARNet contact telephone: 0800-227-638

Reference centers' e-mail: referalni@CARNet.hr

The center's official mobile telephone: 098/947-9891

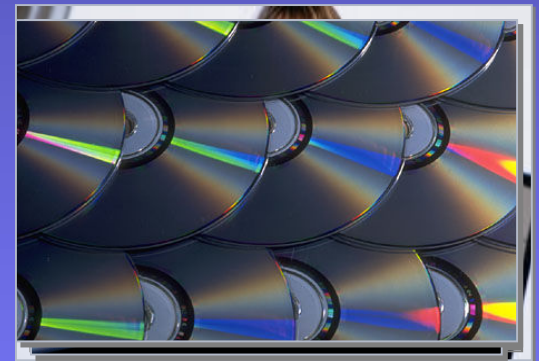
Set up a NetMeeting videoconference!

Reference center coordinator: Assistant professor, Goran Bubaš, Ph.D.

Blended (hybrid) learning

◆ A combination of instructional activities and delivery media:

- Face-to-face lecturing
- Self-paced e-learning
- Internet-based technologies
- Educational media (audio, video etc.)

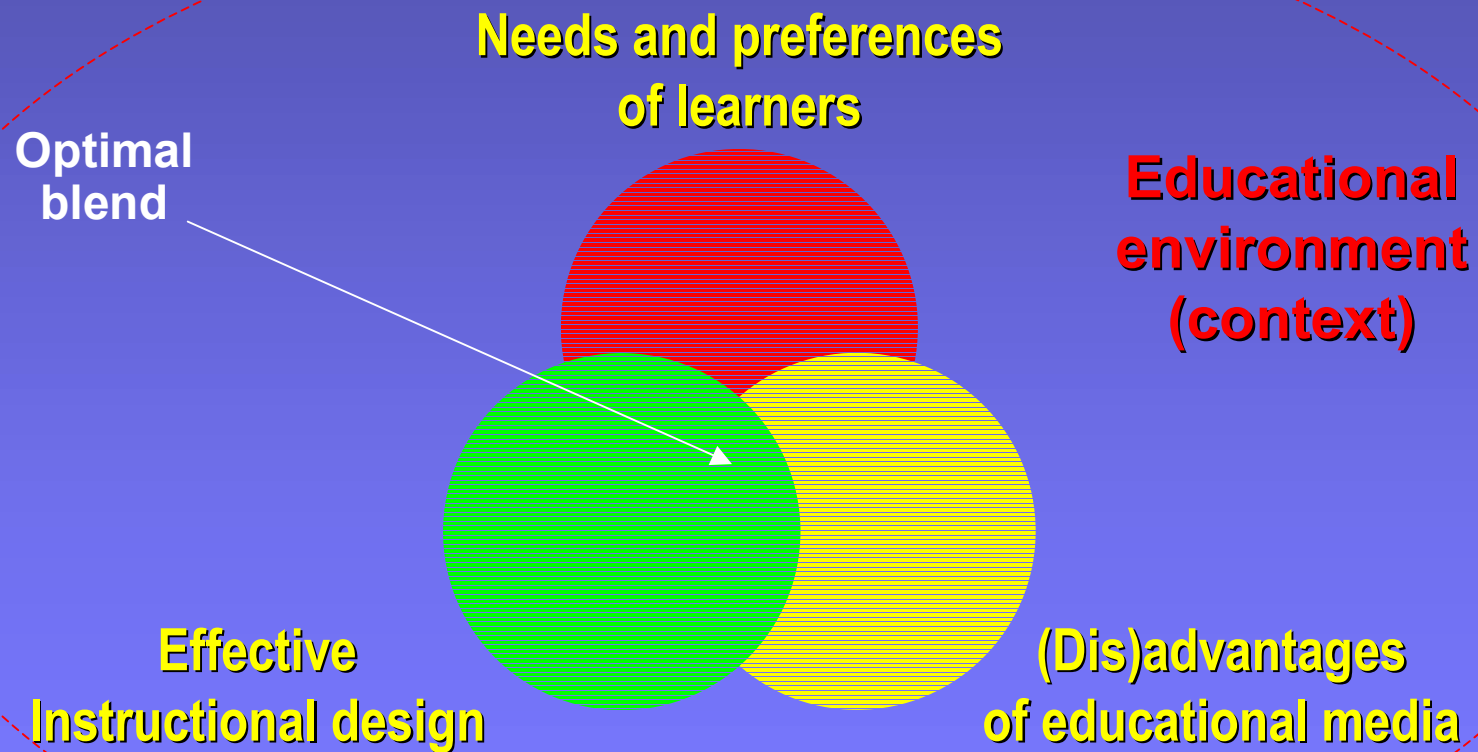




Essence of blended learning (1/2)

- ◆ More than linking classroom learning and e-learning...
 - Sensitivity to the needs of learners
 - Awareness of the (dis)advantages of different educational media
 - Utilization of effective instructional design
 - Context dependancy (available technologies, subject area, attributes of instructor and learners)

Essence of blended learning (2/2)





Basic categories of blended learning

◆ Component blending

- Serial or parallel use of educational media/activity

◆ Integrated blending

- Structural and instructional links between components

◆ Collaborative blending

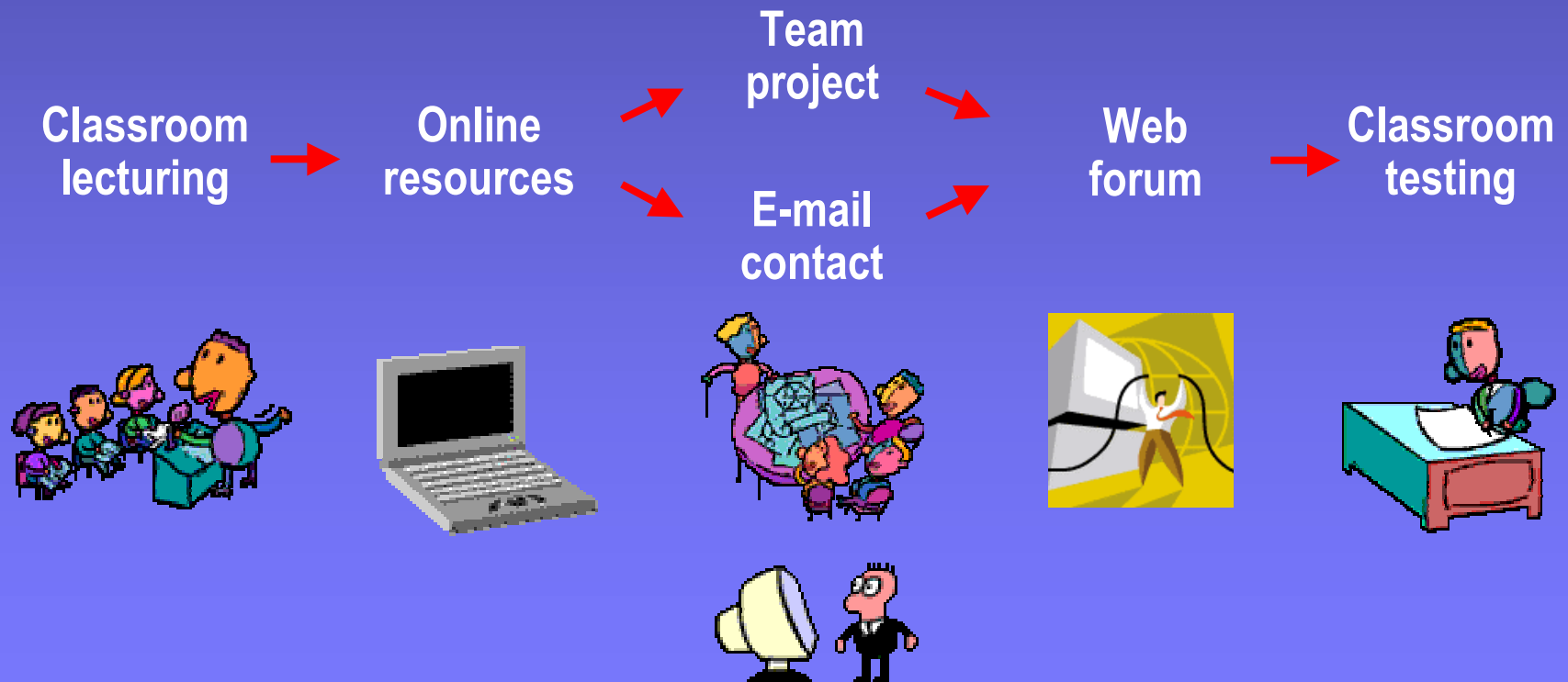
- Group cohesion, effectiveness, sharing & support

◆ Expansive blending

- Adoption of diverse additional technologies and real world project-based or workplace activities

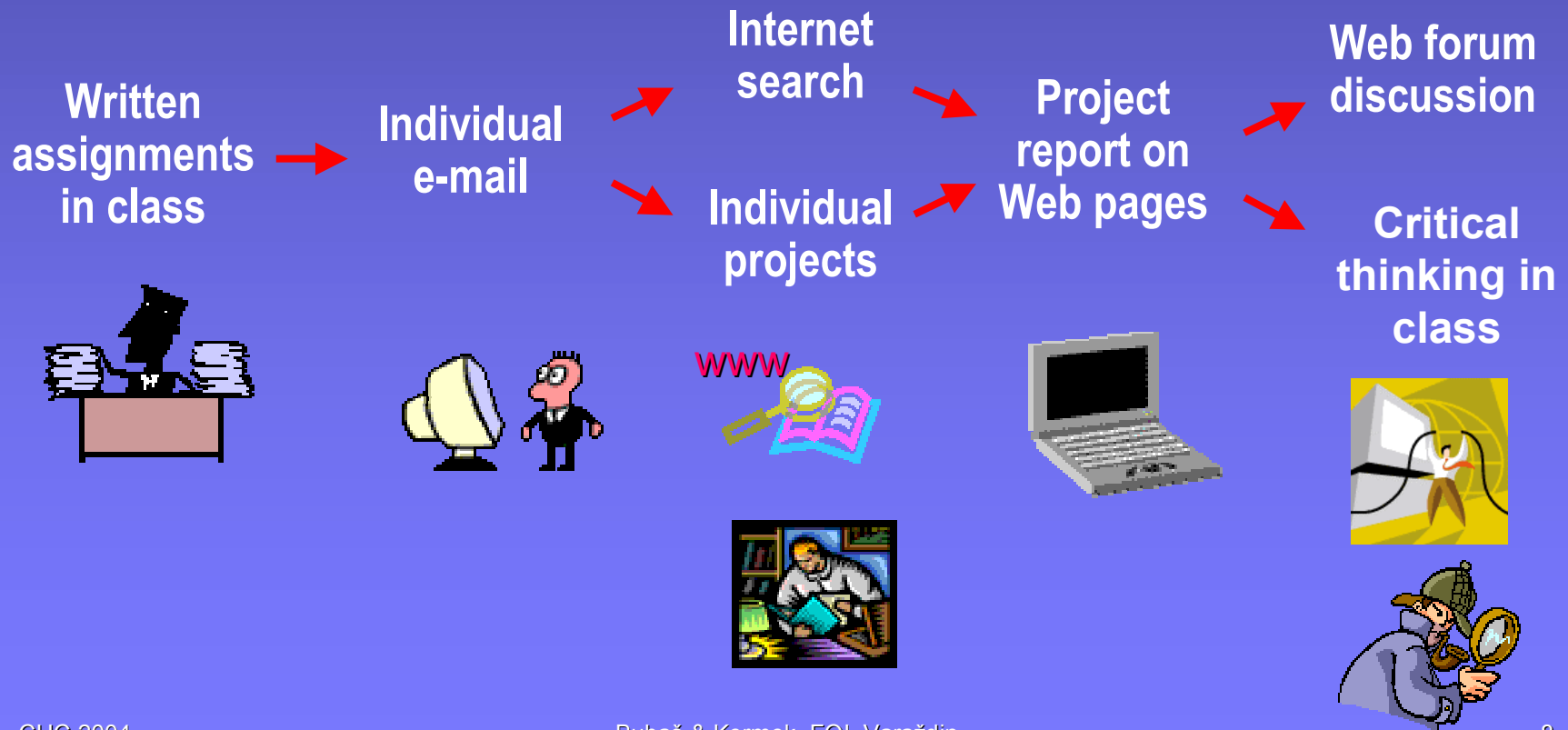
Example of component blending

- Serial or parallel use of educational media/activity



Example of integrated blending

Structural and instructional links between components

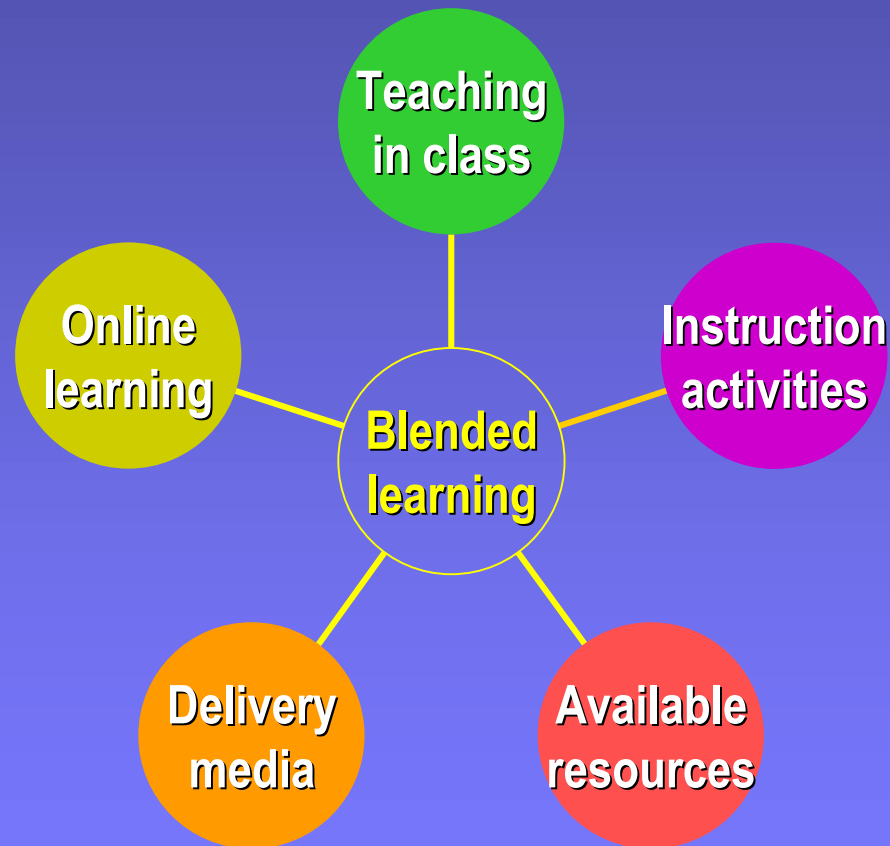




What is optimized in blended learning?

- ◆ **Face-to-face instruction**
 - Flexible, socially motivating, manages complex content
- ◆ **Online instruction**
 - Individualized and self-paced distance learning
- ◆ **Learning styles and communication preferences**
 - Type of content delivery, learning activity, media use
- ◆ **Cost-effectiveness and availability of technology**
 - Resources (funding, educational staff, infrastructure)

Optimization in blended learning





Pressures for blended learning

- ◆ **Global trend toward online educational content**
 - Changing role of college faculty: support for e-learning
- ◆ **Increased workload and technology adoption**
 - More online interaction with students for faculty
- ◆ **Technologically supported learning environments**
 - Internet dominates distance learning media
- ◆ **Less difference between in-class and e-learning**
 - Use of effective course management systems and implementation of learning and teaching strategies

E-learning in Croatia

Academic institutions in Croatia

More than 100 courses with online content

WebCT Course List

If you have a myWebCT

1. click the link in which you are enrolled
2. enter your WebCT ID and Password

To add a course

1. click the link to the course
2. enter the User Name and Password supplied by your school

If you don't have a myWebCT, and you would like to enter or add a course, see online help.

Category: gosti

Use the menu below to view the course list by Category.

View by category: **gosti** | Update

Course	Category	Course Information	Self Information
Analiitička kemija	gosti	---	---
Deskriptivna katalogizacija	gosti	---	---
Digitalna elektronika	gosti	---	---
Dizajn grafičkih medija	gosti	---	---
Ekonomika poduzeća	gosti	---	---
Europa: iz jedne ulice u drugu	gosti	---	---
Filozofska logika	gosti	---	0
Geodezija	gosti	---	---
Geoinformacijski sustavi	gosti	---	---
Global Autopoietic University	gosti	---	---
Gnatologija - Stomatološki fakultet	gosti	---	0
Informacijski izvori i službe 2	gosti	---	---
Informacijski sustavi u PT prometu	gosti	---	0
Interaktivna Fiziologija	gosti	---	0
Introduction to Internet Communication	gosti	---	---
is_trial	gosti	---	---
Klasifikacija i knjižnični klasifikacijski sustavi	gosti	---	0
Kratak uvod u PowerPoint	gosti	---	---
Linux Professional Institute 1.01	gosti	---	---

WebCT courses

VIRTUALNO SVEUČILIŠTE

ONLINE KOLEGIJI | DIGITALNE KNJIŽNICE | VISOKA UČILIŠTA | INTERNET PODRŠKA

PREGLEDAVANJE KOLEGIJA

URL	Kolegij	Područje	Visoko učilište
	Grđevna statika	tehničke znanosti	Grđevinski fakultet (Zagreb)
	Inteligentna potpora odlučivanju	tehničke znanosti	Ekonomski fakultet (Osijek)
	Interaktivna fiziologija: Jesmo li kiseli?	biomedicina i zdravstvo	Medicinski fakultet (Zagreb)
	Inzulini, glukagon i šećerna bolest	biomedicina i zdravstvo	Medicinski fakultet (Zagreb)
	Inženjerska grafika	tehničke znanosti	Fakultet elektrotehnike, strojarstva i brodogradnje (Split)
	Kemija	prirodne znanosti	Prehrambeno-biotehnoološki fakultet (Zagreb)
	Kormofita	prirodne znanosti	Prirodoslovno matematički fakultet - Prirodoslovni odjel (Zagreb)
	Kriptografija	prirodne znanosti	Prirodoslovno matematički fakultet - Matematički odjel (Zagreb)
	Matematičko modeliranje	prirodne znanosti	Prirodoslovno matematički fakultet - Matematički odjel (Zagreb)
	Matematika	prirodne znanosti	Fakultet organizacije i informatike (Varaždin)

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MINISTARSTVO ZNANOSTI, OBRAZOVANJA I ŠPORTA
CONCEPT&CODE LISTOPAD WEB STUDIO

Virtual university



Problems for e-learning in Croatia

- ◆ Insufficient funding for the extensive development of courses that are fully delivered online
 - Blended learning could be a cost-effective solution
- ◆ Unlikely use of advanced multimedia and sophisticated pedagogy to enhance e-learning environments
 - Blended learning can help improve learning experiences
- ◆ There are no support teams for academic staff or university centers for the advancement of teaching
 - Blended learning can make better use of available resources
- ◆ There is lack of academic staff with sufficient motivation and skill to develop e-learning courses
 - Blended learning may be an intermediate / achievable goal

Exemplary e-learning environments

Hundreds of subject areas of academic e-learning courses, hundreds of WebCT courses at single universities, hundreds of free training courses in IT for ACM and IEEE members

- World Wide Learn directory of online education
- San José State University (SJSU)
- ACM and IEEE web sites

The collage displays four distinct e-learning environments:

- WorldWideLearn:** A comprehensive directory website with a navigation menu including Degrees, MBA Programs, Business Skills, Online Training, Career and Vocational, Continuing Education, Personal Development, Language Courses, and eLearning Resources. It features a search bar and various promotional banners.
- WebCT Course List:** A screenshot of a university's course catalog interface. It includes a search bar, a list of courses with columns for Course, Category, and Credits, and a 'View by category' dropdown menu.
- ACM PD Program:** A screenshot of the ACM Professional Development Program website, highlighting 'Free Courses from the ACM PD Program' and 'Discounted Courses for All ACM Members'.
- IEEE Distance Learning Campus:** A screenshot of the IEEE Computer Society's distance learning platform, featuring a 'CAMPUS OVERVIEW' section, a 'What is the Distance Learning Campus?' section, and a 'Benefits and features' section.

E-learning and blended learning decisions

How to decide what learning media or technology to utilize?

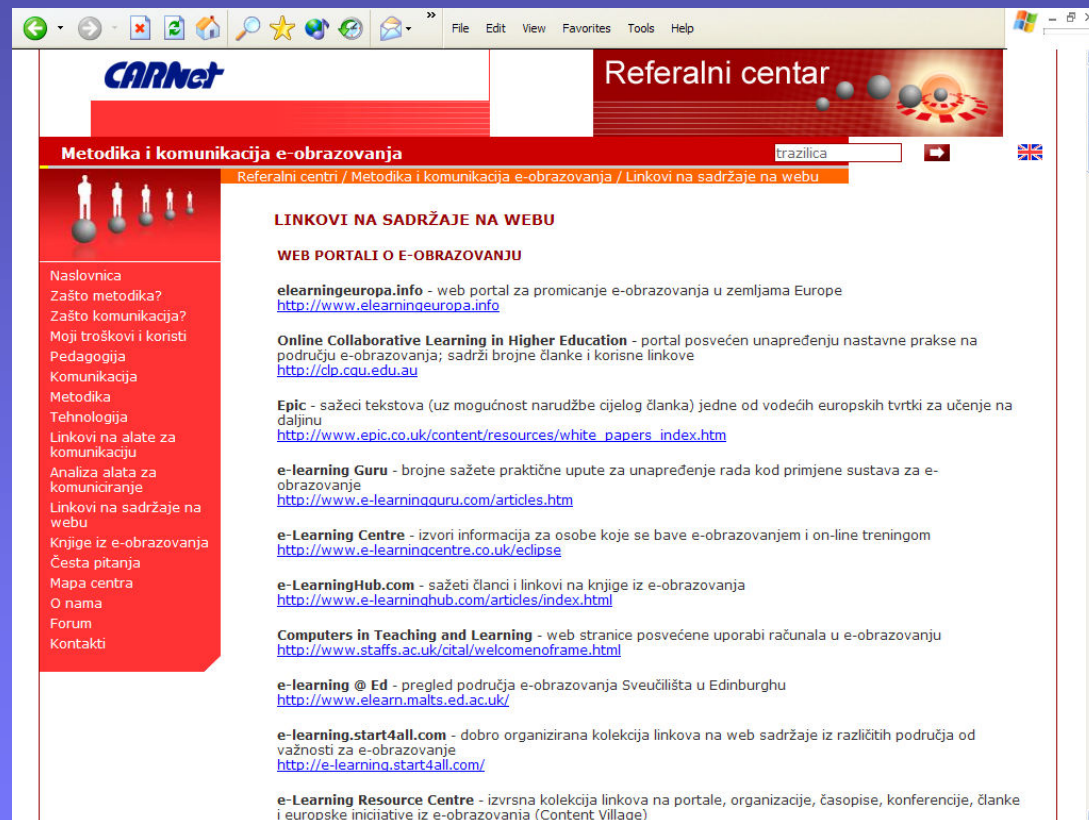
- Stability of learning content
- Time to implement instructional units
- Necessity of human interaction

Less **STABILITY** **More**
Cost **AVAILABLE TIME** **More**

- Synchronous e-learning
- Simple delivery methods
- Online assessment
- Text-based material
- Online collaboration
- Webcasting

- Extensive development
- More complex content
- Interactive Web-based multimedia tools (i.e. WebCT)

Links to resources on blended learning



The screenshot shows a web browser window displaying the CARNET website. The page is titled "Referalni centar" and features a navigation menu on the left with items like "Naslovnica", "Zašto metodika?", "Zašto komunikacija?", "Moji troškovi i koristi", "Pedagogija", "Komunikacija", "Metodika", "Tehnologija", "Linkovi na alate za komunikaciju", "Analiza alata za komuniciranje", "Linkovi na sadržaje na webu", "Knjige iz e-obrazovanja", "Česta pitanja", "Mapa centra", "O nama", "Forum", and "Kontakti". The main content area is titled "LINKOVI NA SADRŽAJE NA WEBU" and lists several resources with their respective URLs:

- WEB PORTALI O E-OBRAZOVANJU**
- elearningeuropa.info** - web portal za promicanje e-obrazovanja u zemljama Europe
<http://www.elearningeuropa.info>
- Online Collaborative Learning in Higher Education** - portal posvećen unapređenju nastavne prakse na području e-obrazovanja; sadrži brojne članke i korisne linkove
<http://dlp.cqu.edu.au>
- Epic** - sažeci tekstova (uz mogućnost narudžbe cijelog članka) jedne od vodećih europskih tvrtki za učenje na daljinu
http://www.epic.co.uk/content/resources/white_papers_index.htm
- e-learning Guru** - brojne sažete praktične upute za unapređenje rada kod primjene sustava za e-obrazovanje
<http://www.e-learningguru.com/articles.htm>
- e-Learning Centre** - izvori informacija za osobe koje se bave e-obrazovanjem i on-line treninjom
<http://www.e-learningcentre.co.uk/eclipse>
- e-LearningHub.com** - sažeti članci i linkovi na knjige iz e-obrazovanja
<http://www.e-learninghub.com/articles/index.html>
- Computers in Teaching and Learning** - web stranice posvećene uporabi računala u e-obrazovanju
<http://www.staffs.ac.uk/cital/welcomeoframe.html>
- e-learning @ Ed** - pregled područja e-obrazovanja Sveučilišta u Edinburghu
<http://www.elearn.malts.ed.ac.uk/>
- e-learning.start4all.com** - dobro organizirana kolekcija linkova na web sadržaje iz različitih područja od važnosti za e-obrazovanje
<http://e-learning.start4all.com/>
- e-Learning Resource Centre** - izvrsna kolekcija linkova na portale, organizacije, časopise, konferencije, članke i europske inicijative iz e-obrazovanja (Content Village)

<http://www.carnet.hr/referalni/obrazovni/mkod/linkovi/sadrweb>

A case of blended learning

- ◆ Two years of teaching courses with LMS at Faculty of Organization and Informatics, Varaždin
 - Face-to-face was necessary for introduction to course
 - Complex content was best learned in “*lecture + online exercise*” (in class, at home)
 - Majority of students preferred combined face-to-face and online content delivery
 - Valuable use of newsletters and forum
 - Highly evaluated learning experiences by most students





Thank you for your attention !!!