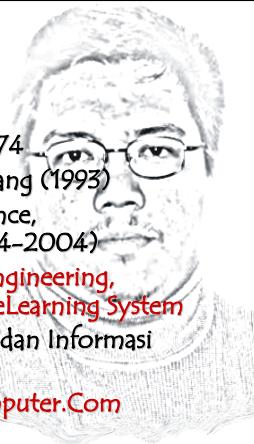


Pembelajaran Jarak Jauh: Masalah dan Keuntungan

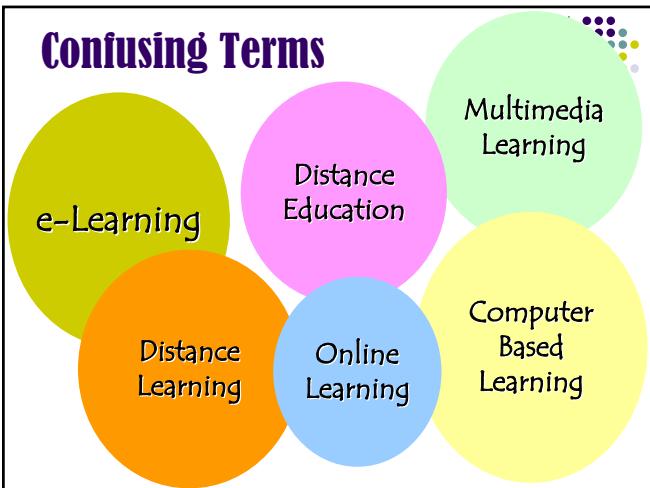
Romi Satria Wahono
<http://romisatriawahono.net>
rsw@romisatriawahono.net



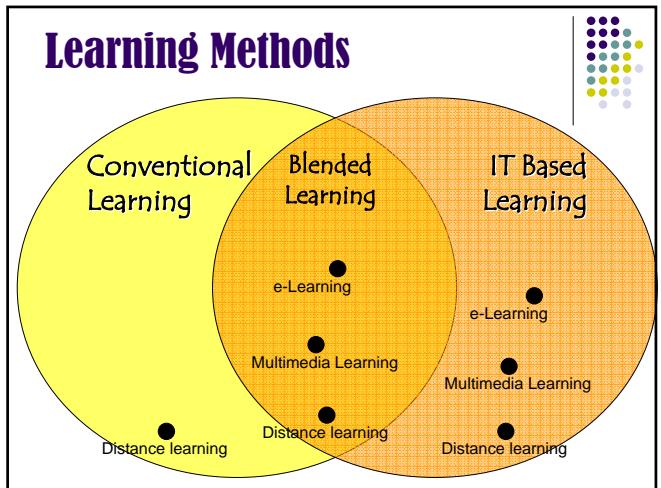
- Lahir di Madiun, 2 Oktober 1974
- **SMU Taruna Nusantara** Magelang (1993)
- Department of Computer Science,
Saitama University, Japan (1994–2004)
- Core Competence: **Software Engineering, Knowledge Management** dan **eLearning System**
- Peneliti di Pusat Dokumentasi dan Informasi Ilmiah **LIPIS**
- Koordinator Umum **IlmuKomputer.Com**



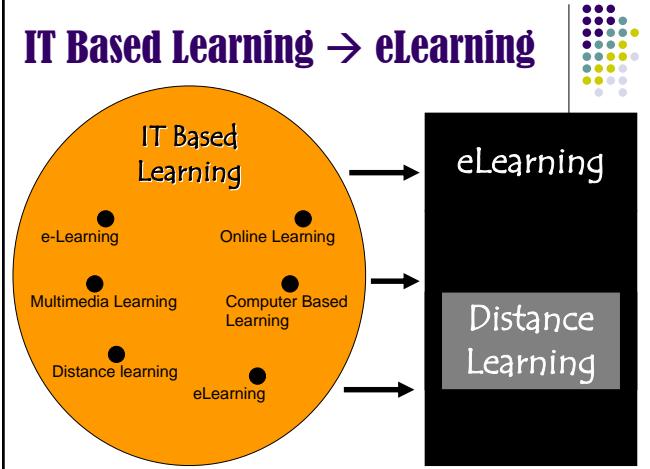
Confusing Terms



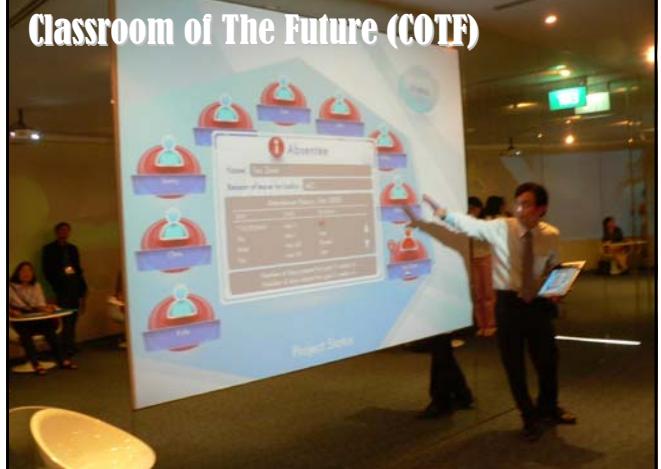
Learning Methods



IT Based Learning → eLearning



Classroom of The Future (COTF)



eLearning Delivery Methods



- **Synchronous:** Instructor and participants are involved in the course, class or lesson **at the same time**
- **Asynchronous:** Instructor and participants are involved in the course, class or lesson **at different times**



Asynchronous eLearning

eLearning System



- **Content**
 - Multimedia
 - Text
- **Learning Management System**
 - Application Software
 - Class Management
- **Infrastructure**
 - Multimedia Peripheral
 - Computer
 - Network (Internet)

eLearning System - Cisco

CISCO NETWORKING ACADEMY PROGRAM CCNA 1: Networking Basics v3.1

6.1 Cabling LANs 6.1.6 Repeaters

This page will discuss how a repeater is used on a network.

The term repeater comes from the early days of long distance communication. A repeater was a person on one hill who would repeat the signal that was just received from the person on the previous hill. The process would repeat until the message arrived at its destination. Telegraph, telephone, microwave, and optical communications use repeaters to strengthen signals sent over long distances.

A repeater receives a signal, regenerates it, and passes it on. It can regenerate and retime network signals at the bit level. This allows them to travel a longer distance on the media. Σ Ethernet and IEEE 802.3 implement a rule, known as the 5-4-3 rule, for the number of

http://assessment.netacad.net/delivery/pub/doct/evaluated - Microsoft Internet Explorer

Close Window

Assessment System

1. Assessment Overview 2. Assessment Settings 3. Take Assessment

Take Assessment - Module 9 Exam - CCNA 1 Networking Basics (Version 3.1)

Time Remaining: 01:59:45

1. What is IP considered to be a best-effort protocol?
 A. IP selects best path.
 B. IP orders the content of the packets.
 C. IP does not provide acknowledgement of the data delivery.
 D. IP reorders the packet as they arrive at the destination host.

2. What is the network broadcast address for a Class C address of 192.168.32.0 with the default subnet mask?
 A. 192.168.0.0
 B. 192.168.0.255
 C. 192.168.32.0
 D. 192.168.32.254
 E. 192.168.32.255

3. How many usable hosts are available given a Class C IP address with the default subnet mask?
 A. 254
 B. 255
 C. 256
 D. 510
 E. 511
 F. 512

4.



EDUCA SYSTEMS
NETWORK
ACADEMY

CERTIFICATE OF COURSE COMPLETION

CCNA 1 NETWORKING BASICS

During the CCNA 1 Course administered by the undersigned instructor, the student was able to proficiently:

- Define and install the necessary hardware and software components required to administer a network.
- Demonstrate the mathematical skills required to work successfully with octet decimal, binary, and hexadecimal numbers and simple binary logic.
- Define the structure and technologies of modern computer networks.
- Define the meaning and application of “bandwidth” as used in networking.
- Compare and contrast network communications using the OSI and TCP/IP models.
- Describe the major protocols and standards associated with copper and optical media used in networks.
- Explain the concepts of transmission and reception of wireless signals used in networks.
- Install and configure LAN
- Explain the fundamentals of signal transmission on networking media
- Describe the different topologies and physical issues associated with cabling common LANs.
- Describe the physical issues associated with cabling networking equipment to work over a WAN link.
- Explain the fundamentals of Ethernet media access
- Explain how collisions are detected
- Explain the concepts associated with auto-negotiation on Ethernet switches
- Describe the principles of switching in an Ethernet network
- Compare and contrast collision and broadcast domains, and explain how networks can be segmented
- Demonstrate familiarity with all aspects of IP addressing
- Describe the association of an IP address with a device interface and the relationship between physical and logical addressing
- Describe the principles and practice of packet switching within IP networks
- Explain routing concepts, and the different methods and protocols used to achieve them
- Describe how the protocols associated with TCP/IP allow host communication to occur
- Describe the fundamental concepts associated with transport layer protocols, and compare the connectionless approach to transport with the connection-oriented one
- List the major TCP/IP application protocols, and briefly define their features and operation

Maman Hendaraman

Date : December 18, 2004

Instructor : Satri Wahono Romi

Location : JAKARTA

Academy Name : CENTRE FOR SCIENTIFIC DISSEMINATION AND INFORMATION - LPI

Instructor's Signature:

The screenshot displays the Universitas Terbuka eLearning System interface. At the top, there's a purple banner with the title 'eLearning System - UT'. Below it is a standard Microsoft Internet Explorer toolbar. The main content area has a yellow header 'Informasi Umum' (General Information) containing a login form with fields for 'Username' and 'Password', and a 'Login' button. To the right of this is another yellow box titled 'UJI COBA UJIAN ONLINE' with the date 'Selasa - Thursday, 1 September 2005, 15:13'. Further right is a section for 'Materi Pendukung' (Supporting Materials) with links like 'Strategi Belajar Mandiri', 'Materi Web Suplemen', and 'Jurnal Sains Radi'. A large blue box below these contains the text 'mkujcoba_052.xls'. On the left, there's a sidebar with links for 'Home Utama', 'Informasi Umum', 'Kalender Akademik', 'Forum Tanggapan', 'Aktivasi UT-ONLINE', 'Panduan Info SMS-UT', 'Panduan Tutel (word 1,4)', 'Panduan Tutel (pdf 1,4)', 'Panduan TM Online', and 'Chatting Anggota Diskusi'. A search bar at the bottom left says 'Pencarian Forum'. On the right, there's a 'Pengguna yang sedang Online' (Users online) section showing '(1 orang yang laku)' and 'Tidak ada'. A 'BERITA TERKINI' (Latest News) section is also present.

Text Content

MIT OpenCourseWare (<http://ocw.mit.edu>)

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Massachusetts Institute of Technology

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Electrical Engineering and Computer Science



Electrical engineering, originally taught at MIT in the Physics Department, became an independent degree program in 1962. The Department of Electrical Engineering was formed in 1962, and occupied its new home, the Lowell Building, when MIT was still located near Copley Square in Boston. The Department dedicated its current facilities in the Sheetz Laboratories of Electrical Engineering and Electronics complex in 1975, and a year later, it recognized its growing activity in computer science by changing its name to Electrical Engineering and Computer Science. The Department's activities in computer science, communications, and control moved into the architecturally unique and exciting Ray and Maria Stata Center for Computer, Information, and Intelligence Sciences in Spring 2004.

The primary mission of the Department is the education of its students. Its three

How People Learn*	
Learning Method	% Learned
Teach Others	90%
Learn by Doing	75%
Discussion Groups	50%
Demonstration	30%
Audio Visual	20%
Lecture	5%

Reconceptualizing Effective Learning -2-

- Penyerapan sebesar 1,5% melalui **sentuhan**
- Penyerapan sebesar 3,5% melalui **penciuman**
- Penyerapan sebesar 11% melalui **pendengaran**
- Penyerapan sebesar 83% melalui **penglihatan**

Francis M. Dwyer



Reconceptualizing Effective Learning -3-

Metode Pengajaran	Pengungkapan Kembali Setelah 3 Jam	Pengungkapan Kembali Setelah 3 Hari
1. Memperdengarkan	70%	10%
2. Mempertunjukkan	72%	20%
3. Memperdengarkan dan Mempertunjukkan	85%	65%



Multimedia Content



Perpaduan antara teks, grafik, sound, animasi, dan video untuk menyampaikan pesan kepada publik



Multimedia Content



Benefit -1-

- Mengurangi **biaya** perjalanan
- Menghemat **biaya pendidikan** secara keseluruhan (infrastruktur, peralatan, buku-buku)
 - Buckman Lab: \$2.4 juta → \$400 ribu
 - Aetna: menghemat \$3 juta
 - HP: \$7 juta → 1.5 juta
 - Federal Internasional Finance: menghemat \$1 juta
- **Menghemat waktu** dan fleksibel dalam proses belajar mengajar
 - Dapat dilakukan dimana saja dan kapan saja



Benefit -2-

- Menjangkau wilayah **geografis** yang lebih luas
- Melatih pembelajar lebih **mandiri** dalam mendapatkan ilmu pengetahuan
- Percepatan program pelatihan dan sertifikasi → **peningkatkan daya saing SDM**



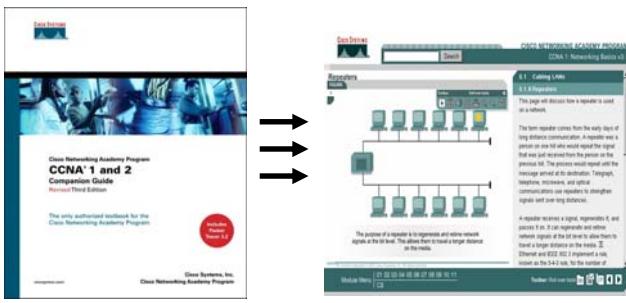
Benefit -3-

	Conventional	eLearning
Availability	Limited	24 hours
Place	Centralized	Anywhere
Participant	Limited	Unlimited
Instructor	Scheduled based	Flexible
Material	Fixed	Easy to update
Method	Paper based	Multimedia
Simulation	High cost	Low cost
Man hours	Used for training	In working hours
Accommodation	Hotel, travel, allowance	None

Problems

- Infrastructure
 - Network and Internet Connection
- Content
 - Combining Tacit and Explicit Knowledge
 - Delivered as well as Conventional Learning
- Quality Assurance
 - Procedure
 - Legality
- Human Factor
 - Behavior and Culture Change

Content Shift-Paradigm -1-



Content Shift-Paradigm -2-



Data Kegagalan eLearning

- Studi Forrester Group tahun 2000 kepada 40 perusahaan besar:
 - Lebih dari 68% menolak untuk mengikuti pelatihan/kursus yang menggunakan konsep e-Learning
- Ketika e-Learning itu diwajibkan kepada mereka:
 - 30% menolak untuk mengikuti [Dublin, 2003]
- Studi lain mengindikasikan bahwa dari orang-orang yang mendaftar untuk mengikuti e-Learning:
 - 50-80% tidak pernah menyelesaikannya sampai akhir [Delio, 2000]

Is Not Just a Technology

Everyone is talking about technology, when what's important is **what people do with technology**

Martin Cooper (Motorola)