

Approaches to Improving Information Literacy for Young Academics in Ubiquitous Environments

By: Zainal A. Hasibuan
University of Indonesia
And
Aditya Chandra
Petra University

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Background and Motivation

- ☞ Indonesia is geographically vast – 17.000 islands create islands of information literacy.
- ☞ Deployment of ICT in the ubiquitous and heterogeneous systems: different data format, different platforms and different protocols – interconnectivity.
- ☞ Large volume of digital information creating, collecting, processing, and disseminating - lack of visibility and accessibility.



Problems and Challenges

- ☞ Low participation rate to enter HEI: it is around 17%.
- ☞ Lack of relevance study program. In 2007, there are 113 sp were closed and 761 new sp were open.
- ☞ Lack of relevance graduates. The unemployment rate for bachelor degree holders increased from 183,629 to 409, 890.
- ☞ Lack of quality resources sharing (information, facility, human, budget etc.).
- ☞ Regional disparities and inequities that create digital divide, information divide, and knowledge divide.

➔ Solution is to improve information literacy



WHAT IS INFORMATION LITERACY?

- ☞ “Ability to locate, organize, evaluate and use information”
- ☞ “ ... as a key set of skills that people will need in the information age”.
- ☞ “... initiates, sustains, and extends lifelong learning through abilities that may use technologies”
- ☞ "A new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure and its social, cultural, and philosophical context and impact."



Objectives of Information Literacy Initiatives

- ☞ Improving number of information literate in HEI's students.
- ☞ Widening accessibility to various information sources through building up one-stop system.
- ☞ Increasing availability of digital information sources through endorsement of local content creation.
- ☞ Establishing ICT infrastructures through out the country.
- ☞ Improving the quality of human resources through quality of education.



Approaches to Improve Information Literacy

- ☞ Empowering HEI associations to go beyond disciplines and professions – sharing information sources and course materials
- ☞ Empowering forum of HEI libraries
- ☞ Aligning government strategies, especially Ministry Of Education strategies to widening access and improve quality of education
- ☞ Developing a concrete programs: Digital Library Applications and E-Learning, digital content



Aligned Government Policy and Investment to Information Literacy Initiatives

- ☞ Issuing decree of education that allows ICT-based education programs.
- ☞ Issuing decree of electronic information transaction that allows fee-based document interchange, course interchange.
- ☞ Developing high speed internet infrastructure among HEI
- ☞ Developing one-stop place to find educational information – electroning education bursa



High Speed Internet: Indonesian Higher Education Networks (INHERENT)

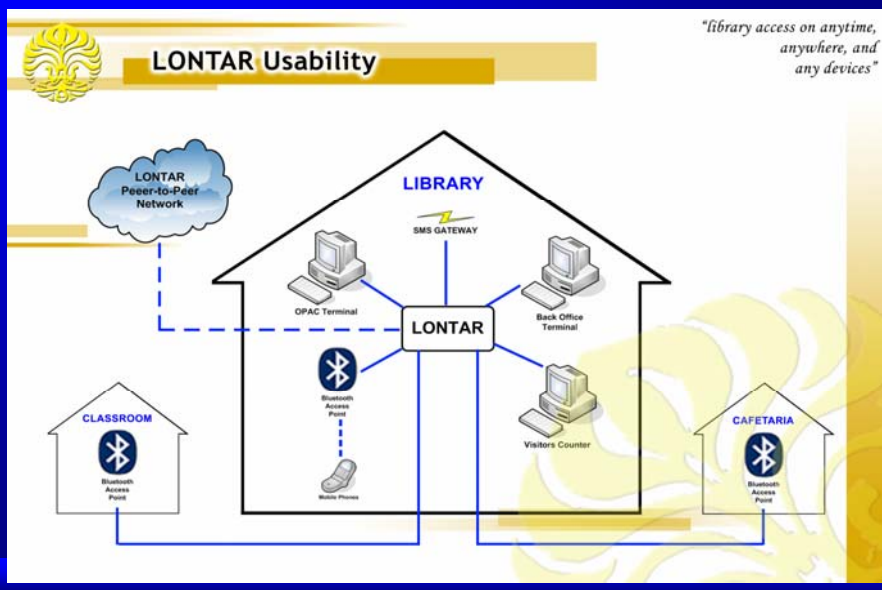


Development Programs

- ☞ Developing digital library applications
- ☞ Developing e-learning system
- ☞ Developing digital local content: online catalogue, digitalization of documents, online course materials, etc.
- ☞ Developing interlibrary loan among HEI libraries



LONTAR: Distributed Digital Library Application at University of Indonesia



LONTAR: Distributed Digital Library Application at UI

- ☞ LONTAR integrates the concepts of library automation, distributed library system, digital library system and context sensitive information retrieval as its search engine
- ☞ Virtual one-stop place to find information in the distributed library systems
- ☞ Encourage library resource sharing



Characteristics of Lontar

- ☞ Transportability, interconnectivity and interoperability
- ☞ Dynamic field of MARC Record
- ☞ SMS gateway
- ☞ Resource sharing among libraries
- ☞ Import & Export with ISO2709 compliance
- ☞ Support for internationalizations of language
- ☞ Easy to connect with other information systems



SPEKTRA: Library Automation and Digital Content Management System

- ☞ Windows based application deployable in remote areas
- ☞ Low cost maintenance
- ☞ Union catalogue with batch mode updating
- ☞ Interlibrary Services among members of InCU-VL (Indonesian Christian Universities Virtual Library)



IndonesiaDLN: Networks of Digital Libraries in Indonesia

- ☞ Lead by Bandung Institute of Technology
- ☞ Open source and Open Archives Initiative
- ☞ Metadata harvesting of digital collections
- ☞ Involve many HEI.



Standard dan Interconnectivity

- ☞ Standard for electronic resources: Dublin Core
- ☞ Standard Protocol untuk interconnectivity
 - OPEN Archive Initiative (OAI)-PMH
 - Z39.50
- ☞ Standard data interchange in the Web: XML (eXtensible Markup Language)



Scele: E-learning System at University of Indonesia

- ☞ Hybrid and dual mode system
- ☞ Replacing few class sessions
- ☞ Course content:
 - Text
 - Audio
 - Video
- ☞ Accessible through internet

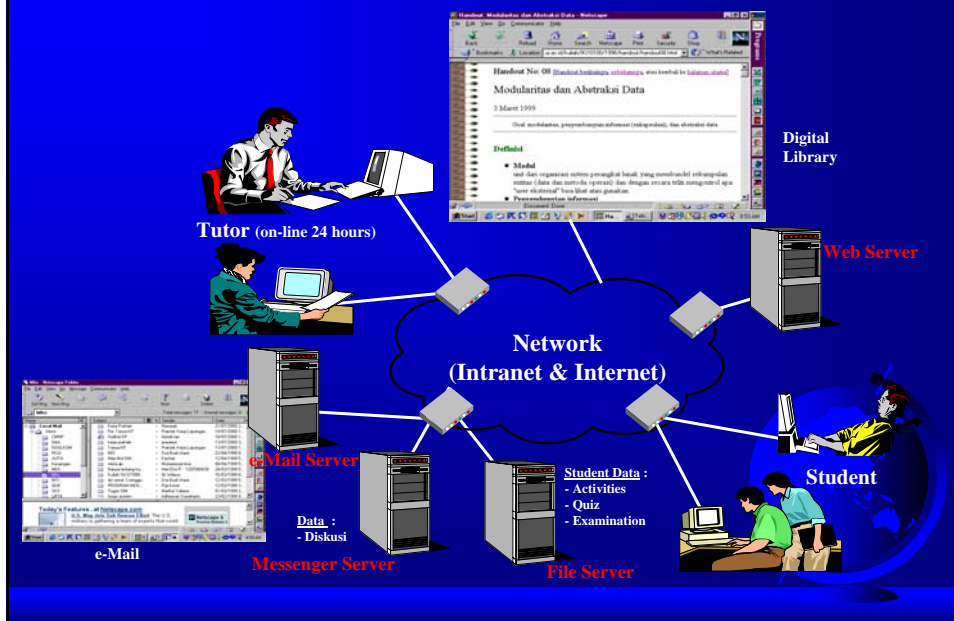


PCU Camel: Petra's E-learning System

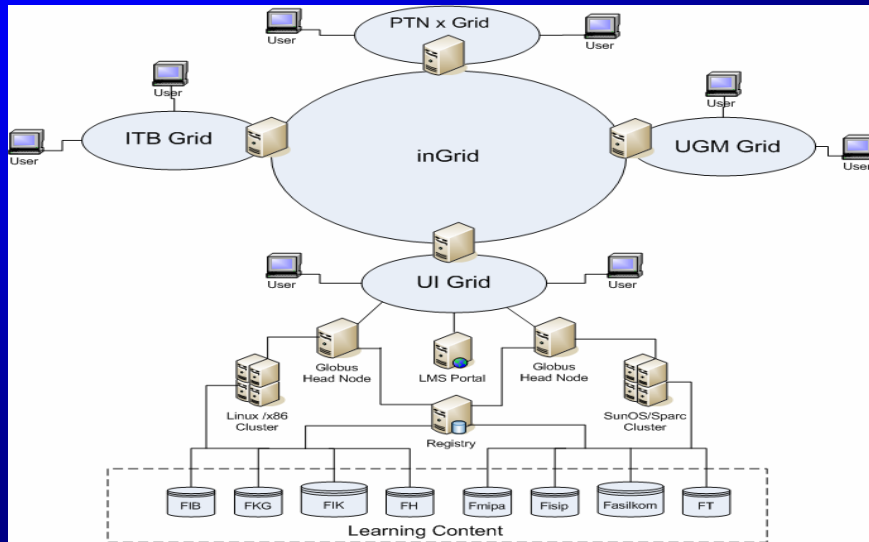
- ☞ Enhancing conventional teaching and learning
- ☞ Accessible through internet
- ☞ Course based, not yet program based.



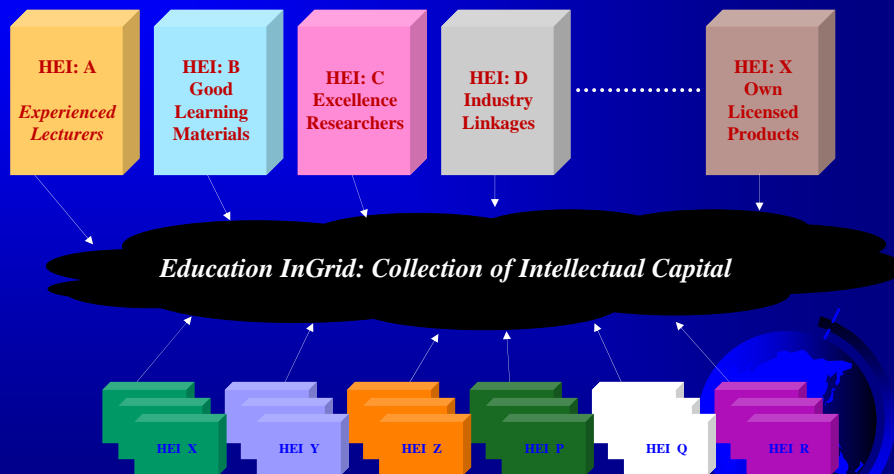
SCELE: UI e-Learning System



The Design of HEIs Collaborations Through Grid Technology



The Design of e-Learning Resource Sharing in HEI



(Source APTIKOM, 2008)

E-Learning System in Higher Education Institutions

	Name of the Higher Education Institution	Website Address
1	Universitas Indonesia (University of Indonesia)	scele.ui.ac.id, cml.ui.ac.id
2	Institut Teknologi Bandung (Bandung Technology Institute)	kuliah.itb.ac.id
3	Universitas Gadjah Mada (University of Gadjah Mada)	i-elisa.ugm.ac.id
4	Universitas Bina Nusantara (University of Bina Nusantara)	ebinus.com
5	Universitas Terbuka (Open University)	ut.ac.id



Conclusions

- ☞ Information literacy initiatives encourage resource sharing and collaboration among HEI.
 - ☞ Government policy and regulation are needed to improve ICT infrastructure for information literacy.
 - ☞ Developing digital library application and e-learning system aims to improve information literacy, especially for college students.
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