Implementation of Open Course Ware in Development of Certification Test on Students of Informatics Field using Content Management Application

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BACKGROUND

OCW Application and Ubiquitous Learning (6 Journal IEEE)

Regulation of the Education and Student Affairs, Ministry of Research, Technology and Higher Education (Kemenristek Dikti) No. 44 tahun 2015 - SLC

“Academic certificates, professions and competences!”

BNSP (National Agency for Education Certification– LSP Informatika (Professional Certification Institute)

APTIKOM (Higher Education Institution in Informatics and Computer Science in Indonesia)

PROFESIENCE OF INFORMATICS INFORMATION COMPETENCY TEST

Infrastruktur e-learning Infrastructure e-learning with OCW - CMA: Competency Test
OCW – CMA : Uji Kompetensi

Implementation of OCW in Development of Certification...
EDUCATIONAL RELEASE - COMPETENCE TESTS

Availability
- Limitations of University Capacity / Capacity

Affordability
- Distribution PT
- Tuition fee Accommodation

APK < 30%

Equality
- Not Equal in providing quality education services

Security
- Can not guarantee to meet All Requests High quality education

Quality
- Quality education resources limited

concentrated in Java Island

Ensure good quality education for all

Aim

Improve access to higher quality education with the addition of minimum resources

Target

Improve the quality of existing higher education by using existing human resources

Strategy

Opening an online classroom course (KKNI)

Providing online courses (KKNI)

Action

PROFESIENCE OF INFORMATICS INFORMATION COMPETENCY TEST
The development of ICT continues to increase along with the increasing needs of human beings. The development of ICT has now entered all the lines of life.

Each campus has full authority in preparing the curriculum based on the rules established by Kemenristek Dikti.

As a result of curriculum variation, the competence of each campus graduate is different, although coming from the same field of study.

Entrepreneurial competencies required by graduate users (industry field) are less relevant to the competence of graduates.
THE CONCEPT OF HIGH EDUCATIONAL COLLABORATION AND COMPETENCE TEST

Organizer

University, Institutions

individual

Aggregator

AGGREGATOR
Regulation & QA

Open Content / Materi Terbuka

Open Courseware / MK Terbuka

Open Learning / MK Daring

Services

Users / Stakeholders

Mhs dlm Prodi

Mhs dlm MK

dosen

PT

Umum

Professional Certification Agency
Professional Association
Implementation of Open Course Ware in Development of Certification Test on Students of Informatics Field using Content Management Application
Methodology

- Design of Development Model
- Characteristics of Developed Models
- Research Steps
- Systems development mode
Profile of college graduate informatics

**Employees**
Evaluate his career from staff level to higher levels, both in the company and other forms of organization.

**Entrepreneur**
Using his creativity and innovation skills to build independent businesses or create jobs for others usually starts with building small and medium-sized UKM.

**Professional**
Becoming a freelancer ready to be recruited anytime by anyone in project-based or program-based format.

**Bureaucrats**
Work as civil servants or government employees on the basis of roles and functions that have been defined by the state.

**Academics**
Focusing on being a lecturer, lecturer, or researcher at various higher education institutions that give birth to new graduates.
Field conditions both technically and non-technical

Data

The absence of a data that collects all certification test participants or industry knowledge test (Proficiency) both who have followed and have successfully passed the proficiency test.

Information Test

There is still very limited information on industry knowledge test given by industry association or association of professional field of informatics given to students and lecturers in each campus.

Information

There is no information from the campus stating that graduates from each subject study program have a score or have competence in their respective fields.

Agregator

Not yet seen a system that acts as an aggregator, which is a system that bridges between the field of industry and the field of campus, especially in the field of Certification Test in the field of Informatics.

Certification Fees

Costs are large enough in following the test of professional certification in the field of informatics for participants both students and lecturers ranging from two million rupiah to tens of millions of rupiah for each one eye certification profession profession field of informatics.

Industri

Very limited information on cooperation between the campus world and industry that is spread openly and can be accessed in media sharing.

Industry Association

There is still not much cooperation between professional associations and industry associations in implementing link and match especially in curriculum development.
Methodology

- Characteristics of Developed Models
Methodology

- Systems development mode

Picture Model Proses Waterfall. (Pressman, 2012)
CONCEPT OF MODEL DEVELOPMENT

Model Dick and Carrey

Model Four-D
Define, Design, Develop, and Disseminate

Model Hannafin dan Peck
Assess, Design and Develop/Implement

Model Borg dan Gall

1). Research and information collecting,
Model Design

**Recommendation**
Can provide recommendations for decision maker to do mentoring

**Facilitate**
Can facilitate to obtain one or more e-certificates for participants who graduated, to be used as Certificate of Certificate Supervisor (SKPI)

**Application**
For users or examinees can use as this app to learn, before the exam is executed

**Data Base**
The results of this application system, can be followed up to the Association of Industrial Professions and National Board of Professional Certification as a data base (whitelist) that has been competent and open access / open
Approach and Research Methods

*Research and Development (R&D)*

Step Research Certification Assessment System

*Implementation of OCW in Development of Certification...*
Research Methodology & Approach

Research Approach
Research and Development (R&D)

Assessment criteria
Aspects of Software Engineering, Aspects of Learning Design, Visual Communication Aspects,

Population and Sample
This research is the pollution of all students in universities in the field of informatics in Indonesia. The research sample will be used are students from 20 campuses in 10 provinces in Indonesia

Data Analysis Technique
1. Analysis of field study instrument data
2. Data Analysis Instrument Validation Expert
3. Analysis of participant data

Research Instruments
1. Field study instrument
2. Expert validation instrument
ANALYSIS

- Population and Sample
- Research Instruments
- Data Analysis Technique
RESULTS

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- Map of Competency Test Scheme
- Collaboration of Various Professional Associations
- Designing Application Products
- Testing Competency Test Material
- Socialization of Test Results
Second Year Progress

Implementation of OCW in Development of Certification...
One Semester Progress

Collaboration of Various Professional Associations

Implementation of OCW in Development of Certification...
One Semester Progress

Testing Competency Test Material

Source Pemrograman dalam Web base view-source:http://icbridge.id/subject?type=regular
Please download on fire play store type in IC Bridge there are some questions for preparation of certification test materials

So students can prepare the material to be tested
One Semester Progress

Socialization of Test Results
One Semester Progress

Socialization of Test Results

Implementation of OCW in Development of Certification...
1. It can generate an Open Course Ware Model in implementation of Content Management Application (CMA) with Private Cloud Computing-based to help the preparation of competency test.

2. It is generated a model development by sharing the resources of science owned by universities or experts from the closed system / internal course of study through e-Learning into open learning system (OCW),

3. Produce a form of interactive learning materials by using Learning Management System with Multimedia-based in Open Course Ware model to help students who will take the competency test in the field of informatics in all provinces in Indonesia

4. As an Alternative Learning Strategy in the Preparation of Student Certification Test with web-based in Indonesia
SUGGESTIONS

- The point to be put forward in this suggestion is the need of mindset for the stakeholders to be able to do the diffusion of innovation in the learning organization, so that it will create a tendency in the use of technology in education, so that some issues in application of education technology gradually can become even better. Especially in the utilization of EMU-based technology Learning (Electronic Mobile Ubiquitous). Particularly in the article discussing the use of Content Management Application with Private Cloud Computing-based to assist the preparation of certification test at Professional Certification Institute for Student of Informatics in Indonesia, the concept that is needed is the concept of Facilitating Learning and Improving Performance in this Application,
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Q&A and Discussion.

Thanks You

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