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THE SECOND INTERNATIONAL CONFERENCE ON EDUCATION AND LANGUAGE

20, 21, 22 MAY 2014

Bandar Lampung University, Indonesia

PROCEEDINGS

Hosted by

Teacher Training and Education Faculty (FKIP),

English Education Study Program, Bandar Lampung University (UBL)

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THE SECOND INTERNATIONAL CONFERENCE ON EDUCATION AND LANGUAGE

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20 -22 MAY 2013

Organized by:
Faculty of Teacher Training and Education (FKIP),
English Education Study Program of Bandar Lampung University
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PREFACE

The activities of the International Conference are in line and very appropriate with the vision and mission of Bandar Lampung University (UBL) to promote training and education as well as research in these areas.

On behalf of the Second International Conference of Education and Language (2nd ICEL 2014) organizing committee, we are very pleased with the very good responses especially from the keynote speakers and from the participants. It is noteworthy to point out that about 80 technical papers were received for this conference

The participants of the conference come from many well known universities, among others: University of Wollongong, NSW Australia, International Islamic University Malaysia, Kyoto University (Temple University (Osaka), Japan - Jawaharlal Nehru University, New Delhi, India - West Visayas State University College of Agriculture and Forestry, Lambunao, Iloilo, Philipine - Bahcesehir University, Istanbul, Turkey - The Higher Institute of Modern Languages, Tunisia - University of Baku, Azerbaijan - Sarhad University, KPK, Pakistan - Medical Sciences English Language Teacher Foundation Program, Ministry of Health, Oman - Faculty School of Arts and Sciences, Banga, Aklan Philippines - Sultan Ageng Tirtayasa, Banten, - Pelita Harapan University, Jakarta - STIBA Saraswati Denpasar, Bali - University of Muhammadiyah Yogyakarta - Ahmad Dahlan University Yogyakarta - Sriwijaya University, Palembang - Islamic University of Malang - IAIN Raden Fatah Palembang - Universitas Diponegoro, Semarang, Indonesia - Universitas Haluoleo Kendari - State Islamic University of Sunan Gunung Djati, Bandung - Tadulako University, Central Sulawesi - Sanata Dharma University - Lampung University and Open University,

I would like to express my deepest gratitude to the International Advisory Board members, sponsors and also to all keynote speakers and all participants. I am also grateful to all organizing committee and all of the reviewers who contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector of Bandar Lampung University (UBL) who gives us endless support to these activities, so that the conference can be administrated on time.

Bandar Lampung, 20 May 2014

Drs. Harpain, M.A.T., M.M
2nd lCEL 2014 Chairman

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Education and Language (2nd ICEL 2014)
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Bandar Lampung, Indonesia
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Table Of Content

FOSTERING COLLABORATIVE INQUIRY LEARNING THROUGH CLOUD-BASED APPLICATION

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Abstract

Collaborative inquiry learning are made possible by the development of cloud based application such as Google Doc or Microsoft Office Web apps. With single sign on permission on an email account students can edit and work on task based or research paper collaboratively, while on presentation and data tabulation they can create a rich media content by adding video, hyperlink to a website, interviewed voice or iffen an animation. Students are allowed to exchange their idea, data or opinion that they have collected discuss and proposed it in a paper or presentation in their process of learning. While teacher need to design the theme, essential rule and rubric of assessment on the process. This study use an exploratory methods to explore and experiment more to the design methods of teaching and learning also with the usage of cloud-based application that can foster students collaborative inquiry learning. As the result of the study is teacher have a variation on teaching method that will foster students-based inquiry learning that integrated with language, Science, ICT and art Skills. While students have an engaging and integrated learning experience while studying how to collaborate with others and build up their knowledge through inquiry based learning.

Keywords: Collaborative, inquiry learning, cloud-based application, integrated learning experience, teaching method.

1. INTRODUCTION

As an educator, we have the obligation to always foster student's curiosity in learning so that the students always have passion in exploring, researching knowledge that is share and instructed by their teacher. One of the approaches is inquiry-based learning. Inquiry learning is a pedagogical strategy that cover some approaches of teaching and learning process such as problem –based learning, project-based learning, design-based learning and constructivism. By emphasizing on collaboration in inquiry learning, teachers are fostering student exploration of knowledge, problem solving, critical thinking and understanding of scientific concepts. This approach can be achieved by following six fundamental steps as familiarizing with subject, generating question, exploring knowledge and data collection, interpreting data, revising and drawing conclusions and reporting [5].

In student-centered learning, student are the object of teaching and learning process that enforcing question and generation of idea as a driver of inquiry-based learning. Students will explore and research more to ensure that knowledge is dynamic thing which have more than one correct answer. It will make teaching learning process alive. Inquiry-based learning may occur on individual task, but effectively beneficial if the student have discussion and intensive interaction with teachers and with their friends. Collaborative inquiry learning is used when intensive collaboration work during lesson process as students work to generate idea or solve problem in group.

As the development of technology especially internet, education work seamlessly cut of wall of regional or zonal boundary and time limitation. Students and teacher can connect each other every time, anywhere in teaching learning process. As E-learning were used, students can have more time to review their lesson or try test using e-learning environment, but there are limitation of e-learning where students have to

collaborate with others in solving problem or explaining scientific process of learning from their own perspective. Cloud application were used by google in forms of google document which included documents, spreadsheet, presentation and drawing. Later it revert to google drive in mid-term of 2013. At the beginning it is used to create and open office document using single sign on account in gmail. As it develop to google drive it diverse more application plug-in such as mindmeister as creator of mind mapping tool.

Using google drive as a cloud application, students are be able to open up their inquiry learning subject and collaborate with others in different place within the same or different time without historical log as information who collaborate and in what time he or she edited the document that will be describe more on study phase below.

1.1. Research Question

So, based on the above introduction, we define and enlist it into some research question as follow:

a. How to foster collaborative inquiry learning design a cultural edutainment web portal as an alternative teaching learning and assessment process?
b. Why do we use cloud application in fostering collaborative inquiry learning?

1.2. Research Purposes

Based on the above explanations, the purposes of this research are as follow:

a. Describing and experimenting on fostering collaborative inquiry learning using cloud application provided in google drive.
b. As a reference for the development concept of fostering collaborative inquiry learning using cloud application

1.3. Research Coverages

The coverage of this research will only cover usage of document collaboration and mind mapping lesson learn using google documents and mindmester plug in. The target of this research's result is university students in statistic class ranging from the age of 15 to 20 in the first year leavel.

2. RELATED THEORY

2.1. Defining Inquiry Based Learning And Collaborative Inquiry Learning.

Inquiry based learning is a meaningful approach that being emphasizes by several author especially in developing scientific literacy at the beginning. In which traditional approach only focus on memorization of scientific facts and information of phenomena, while inquiry based refer to scientific knowledge as a process developed as product of inquiry that encourage students to find inquiry based solutions for authentic problem[10]

Collaborative inquiry learning as discussed on the introduction above is an inquiry learning of knowledge that enforce a collaborative work with peers or teacher in learning process. It follow 6 steps that are developed into four phase of collaborative inquiry models that is purposed and summarized in table 1[7]. In order for learners to catch the focus in each phase, the learning in each phase is further divided into various learning activities, each corresponding to a learning objective, such as inquiry skills and collaboration skills. Table 1 shows the learning activities in each phase and their corresponding learning objectives for practicing inquiry skills or collaboration skills, as well as the results in each phase [7].

Table 1: Learning activities, objectives, and results in collaborative inquiry learning

Stages	Learning activities	Learning objectives	Results
Phase 1	1. Individual reading of the material. 2. Forming hypothesis 3. Constructing Individual concept maps	1. Familiarising with the topic. 2. Forming hypothesis	1. Individual concept maps
Phase 2	1. Looking for supportive evidence on the web 2. Revising concept maps and editing 3. notepads according to new evidence	1. Exploring 2. Revising	3. Revised individual concept maps 4. Individual notepads

Phase 3	1. Sharing notepads 2. Sharing concept maps 3. Discussion using chat room 4. Revising individual notepad and concept	1. Data sharing 2. Product sharing map 3. Idea sharing 4. Explaining and revising conclusions	1. Individual concept map 2. Individual notepad 3. Chat room dialogue
Phase 4	1. Data sharing in the group 2. Questioning, cooperation, negotiation, communication 3. Voting to decide the group's core concept map 4. Revising the group concept map	1. Knowledge 2. Chat room dialogue 3. Compromise 4. Knowledge negotiation	1. Group concept map 2. Knowledge consolidation

2.2. Definition Of Cloud-Based Application

With vast development of access and sharing content internet without reference of underlying infrastructure, cloud computing establish to extend the paradigm to make application have the capabilities to be exposed as services in a virtual environment [2]. Cloud computing are provide by Google , Amazon, IBM, Microsoft and Sun Microsystem. By using cloud computing user doesn't have to think or have technical expertise about the infrastructure, they only need to know which part of the service or software that they need and share with other.

Cloud computing technology are beginning to be used in education, as it easier the process of sharing files and do collaborative work. There are packages of software that were very easy to use as part of cloud computing called Software as a Services (SaaS) related to collaborate, sharing and creative e-learning system. The software that used as productivity tool called cloud based application, included word processing, spreadsheet, database, presentation , drawing and more plug ins. Cloud-based application like Google Drive and Microsoft office 365 is very easy to share content collaboratively from creation of file, distribution, sharing, chat over discussion on file and seeing historical change of files. Cloud based application also provide low cost alternative software and storage, where teacher, students and its peers can get access to open, edit and chat over the file they work together everywhere and anytime as long as they have internet connection and a browser to open it without boundary of time and space.

Cloud-based application that were used in this study is google drive as it speed and single sign on account is faster and more familiar then others.

Table 2: Literature review on Collaborative inquiry learning and cloud computing

No.	Title and author	Result	Adoption
1	Al-Zoube. Mohammed[10] *E-learning on the cloud*	It presents a cloud computing based solution for building a virtual and personal learning environment which combines a wide range of technology, and tools to create an interactive tool for science education. The proposed environment is intended for designing and monitoring of educational content as well as creating a platform for exploring ideas. The system allows exchange of educational content and integrate different pedagogical approaches to learning and teaching under the same environment.	Reference on cloud computing, cloud-based application and its implementation on education.
2	Pocatilu.P, Alecu.F, Vetrici.M *Using Cloud Computing for E-learning Systems*	It presents the positive impact of using cloud computing architectures upon e-learning solu-tions development. It focuses on the benefits of cloud computing for e-learning solutions and the e-learning project management challenges when this architecture is used.	the concept and reference of e-learning system by using cloud computing
3	Tractenberg. L, Struchiner. M, Okada. A. *A case of web-based collaborative inquiry*	It adopted a web-based collaborative inquiry-learning model supported by UK Open University's Open Learn technologies: a community-led virtual learning environment	Reference to on web based collaborative inquiry-learning model and rubrics

	learning using OpenLearn technologies.	based on Moodle called LabSpace, and a knowledge mapping software called Compendium. Results indicate that the implementation of the web-based inquiry-learning model we have proposed was relatively successful and adequate to the learning setting. Rubrics' scores point to an overall improvement of students' maps and presentations. Reports on students' satisfaction with different aspects of the course were positive. Nevertheless, further investigation on the validity and reliability of the rubrics is required.	system to measure the implementation.
4	K-E.Chang, Y-T. Sung & C-L. Lee *"Web-based collaborative inquiry learning"*	This study proposes a web-based collaborative inquiry learning system. This system uses the World-wide web (WWW) as a source of knowledge exploration, and provides exploratory problems to guide students to think and explore. A concept map is used as a tool of anchoring and representing knowledge during inquiry process. In the process of learning, learners are allowed to exchange the evidence they have collected, their personal opinions, and the concept maps that they have built. In order to effectively integrate the inquiry learning, collaborative learning, and concept map in the system, this study proposes a collaborative inquiry learning model and related learning activities. Two studies were constructed based on the collaborative inquiry learning model to investigate students' learning processes in the collaborative inquiry learning on the web.	Reference on web-based collaborative inquiry learning.

Based on the above researches, this research is different..

3. STUDY

3.1. Study 1

In this study, students were given challenge and inquire to define subject they learn on statistics subject, theory that related in a form of mind map using mindmeister plugins in google drive. The students are collaborating by inquiring subset of statistic subject. Finding their own resources and reference from internet and resume understanding of it using their own word, put up the link on text, video and hyperlink to their reference. They collaborate by dividing and completing each other subset mind map as describe in figure 1 below.

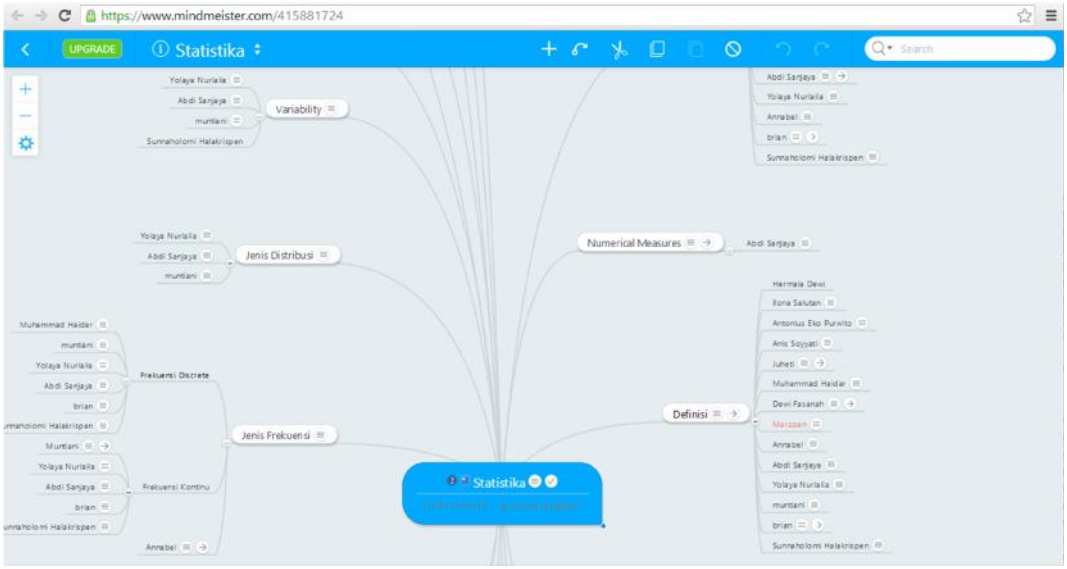

Figure 1. Mind Map Using Mindmester

Result of this study are students still have difficulties in using the technology at the first and second session, but very excited and interested on the process of researching definition and resuming it. They find their own understanding of the concept, share it with others, able to view the others and collaborate to conceptualize lesson they will and ongoing process of learning statistics.

3.2. Study 2

In this study, students were given challenge to answer question that given in google drive document on group about standard deviation and variance chapter of statistic subject, They inquire the answer among each other , find references and collaborate by dividing into group to complete each other based on question given as describe in figure 2 below.

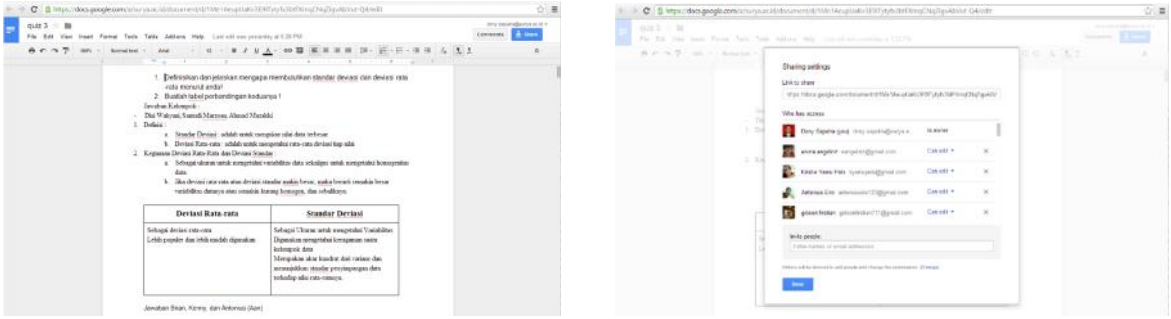

Figure 2. Google Drive Document

Result of this study, students and teacher can view who is active. For those who is inactive they will be motivated as their name will not appeared on the document. 85% of 40 student population felt interested and excited as they can do work collaboratively in different places and in different time although there is targeted time instructed and appeared on the documents.

4. CONCLUSION

a. This research is done by describing ways to foster collaborative inquiry learning through cloud-based application document and mind mapping concept plug in provided in google drive
b. Using Cloud-based application make it easier the teacher in watching the process as well as student excited in researching and defining concept by inquiring it collaboratively with peers with no limitation of time and space, low cost application without having technical skills to administrate the infrastructure
c. Teaching and learning process given another way by using advance on internet technology such as cloud-based application.

REFERENCES

[1] Al Musawi. A, Asan. A, Abdelraheem. A, Osman. M, "a case of web-based inquiry learning model using learning objects", The Turkish Online Journal of Educational Technology, vol.11-1, 2012, Pp.1-9.
[2] Al-Zoube. Mohammed, "E-learning on the cloud ", International International Arab Journal of e-Technology, Vol. 1-2, Arab, 2009, Pp. 58-64.
[3] Bell. T, Urhahne.D, Schanze.S, Ploetzner.R," Collaborative Inquiry Learning: Models, tools, and challenges", International Journal of Science Education,Vol. 32-3,2010, Pp.349-377.
[4] Bora.U.P, Ahmed.M, "E-Learning using Cloud Computing", International Journal of Science and Modern Engineering (IJISME), Vol.1-2, 2013, Pp. 9-13
[5] Goni. I. A. M, "Designing of Portlet-based Web Portals", PHD Disertation University of the Basque Country, Spain,2008, Pg.10
[6] Karim.F, Goodwin.R, "Using Cloud Computing in E-learning Systems", International Journal of Advanced Research in Computer Science & Technology (IJARCST), Vol1-1, 2013.Pp. 65-69
[7] K-E.Chang, Y-T. Sung & C-L. Lee, "Web-based collaborative inquiry learning", Journal of Computer Assisted Learning, Vol-19, 2003, Pp.56-69.
[8] Madan.D, Pant.A , Kumar,S, Arora.A, "E-learning based on Cloud Computing", International Journal of Advanced Research in Computer Science and Software Engineering, Vol.2-2,2012.
[9] Pocatilu.P, Alecu.F, Vetrici.M, "Using Cloud Computing for E-learning Systems", Journal recent advances on data networks, communications, computers, Romania, 2009, Pp.54-59.
[10] Tractenberg. L, Struchiner.M, Okada. A, "A case of web-based collaborative inquiry learning using OpenLearn technologies", proceeding of m-ICTE2009 V, Lisbon,Portugal, 2009, Pp. 891-895
[11] Zheng.H, "A Virtual Learning Community Based on Cloud Computing and Web 2.0", IJCSI International Journal of Computer Science Issues, Vol. 9-6:2, 2012,Pp. 361-366.

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