

SIPEBI: A MODEL OF CULTURAL EDUTAINMENT WEB PORTAL AS A MEDIUM FOR STUDENTS' SELF-DIRECTED-LEARNING AND ALTERNATIVE ASSESSMENT

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Abstract

As the growth of e-learning, students centric learning were adopt to explore more on student directed learning especially in early years learner. On subject such as Science, Math and English have a various website or portal which can accommodate the learner desired to learn more with the subject he or she choose in an interactive and fun way in gaining learning experience. The website and portal also give the teachers an alternative way to teach and assess the students regarding that subject in an interactive and fun way. But there were no web portal that designated for social and cultural study, especially for local content. So the students have no alternative way to learn our culture and the teacher also doesn't have any alternative way to teach and asses the students for this subject. To solve this problem, this research is experimenting in creating an interactive cultural edutainment web portal called Surya Iconic Pusat Edukasi Budaya Indonesia (SIPEBI) that can be used by the student or teacher as a pre-elementary study. The method that we use is an explanatory with an experimental approach by designing and creating a web portal. Result of this research is the creation of cultural edutainment web portal that can accommodate students' self-directed learning and teachers' alternative way to teach and assess students' knowledge on cultural study by exploring the website

Keywords: Portal, self-directed learning, alternative assessment, socio-cultural education.

1. INTRODUCTION

In the process of teaching and learning for Indonesian national plus or international schools, teachers are emphasized to give alternative way of teaching and assessments in addition to the main teaching and assessments on students' learning process. Generally, type of teaching and learning process use one way communication where teacher explain and student pay attention to the teacher. By the development of ICT, especially internet, it change into two way learning process where student explore more of their learning material, with the implementation of web portal using edutainment concept. This type of portal provides games based on students' lessons as well as quizzes, tests until the results of what they have learn in a form of passing certificate. Web Portal like www.bcc.co.uk/bitesize/ks2, gives lessons on English, science and mathematics, while www.ixl.com provides alternative lessons for mathematics and English. Whereas for Social Sciences related to local and Indonesian culture, only provided in a portal by Indonesian Ministry of education that is in <http://belajar.kemdiknas.go.id/> provided, containing resources on Indonesian cultures map but not in the form of edutainment content based on interactive games or material.

Edutainment concepts are learning concepts that is entertaining and fun. In edutainment, students learning process is not only by reading and listening teachers' lectures but they also try or experimented with multimedia content as well as interactive games without losing the lessons' contents. Besides, teachers and schools at primary level are emphasized to design and give lessons aiming on increasing the interests and interactivity of students. The conventional teaching and learning process can be implemented with teaching and learning concept of playing in the form of edutainment.

From the edutainment concept, students can explore lessons that given by teachers and learn more using the technology in self-directed learning concept. As an alternative assessment, the result of those lessons in the

web portal can be printed out by the teacher as authentic students' work portfolio alongside with student's report card distribution.

1.1 Research Question

So, based on the above introduction, the problems that will be used as the reference for problem Solving is as follow:

- a. Are there any resources to do self-directed learning for Indonesian Social and cultural lesson?
- b. How to design a cultural edutainment web portal as an alternative teaching learning and assessment process?
- c. Does that portal can help and ease students up in their learning process and for teachers in giving out alternatives assessments?

1.2 Research Purposes

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

- a. Designing an edutainment culture portal that can be used by primary students.
- b. Analyzing culture contents in the form of edutainment that can be used as alternative assessments and printed as the students' portfolio by the teachers.
- c. As a reference for the development concept of edutainment base on Indonesian cultures.

1.3 Research Coverages

The coverage of this research will only cover review of edutainment concept that applied on web portal design, containing early development of application for 5 Indonesian cultures that is Betawi, Aceh, Makassar, dayak and flores. Sub menu of the web portal will be history, culture and national heroes. Every content consists of narration, video, quiz and game. The target of this research's result is children ranging from the age of 6 to 9 or primary 1 to 3.

2. RELATED THEORY

2.1 Definition Of Edutainment.

Edutainment, according to Jiri N and Josef T [4] is a special form of entertainment that allows the participants to be educated like getting new information from various fields in our life. Edutainment consist of 2 syllables which are education and entertainment, when combined it will be education that gives entertainment. Based on the above opinions, edutainment can be defined as a learning process that's designed to fuse education with entertainment so that learning activities will be fun.

There are 3 assumption concepts that will be the foundation for edutainment concept. The first assumption declares that positive feelings can accelerate learning process while negative feelings slow down and obstruct learning process. The second assumption declares that if someone can use his sense of thinking potential and emotions accurately he'll make a leap in academic achievements that no one can think of. The third assumption declares that if every learners can be motivated accurately and are taught using the right way, in the way of respecting their way of learning, they all will achieve optimized learning result.

Application of those 3 assumptions in edutainment able to give a learning system that is designed interactively, open and fun, not scaring and two way learning environment. This concept places the students as the center of learning process that involves relationship between the student, teacher, learning process and learning environment throughout SIPEBI web portal.

2.2 Definition Of Web Portal

Web Portal is a web page that provides dynamic (customizable, personalizable, unique) user-centric collection (information, application and link) of everything useful to a particular person in a particular role in an organization [5]. Web portal tends to be horizontal, providing various information and public services. Meanwhile vertical portal provides information and specific services for certain fields only so that it will be personal for the visitors.

The main goal of a web portal is to construct a community in a way that is very attractive so that visitors will volunteer in various services that's provided in it [11]. However, the density of the community is high, the developer of web portal has certain methods of distributing data using statistics so that they can know the profile of the visitors and share it in different groups. We also can predict based on various visits patterns so that they know absolutely what services that's demanded the most.

According to Goni [1], web portal is web site that was used as bridge that provides wide variety of resources, service, task and link to other website. Based on his research there will be two kinds of web portal that is

horizontal portals and vertical portals. Whereas Horizontal portals is a type of portal that offered by internet service provider or search engine usually with general purposes such as yahoo or google. Whereas vertical portal is used for specific interest or field such as those portal for medical information.

Meanwhile according to terminology from Lausen [16], web portal is used by community with interest to exchange information presentation over the internet as an entry points. Therefore they require efficient support for communication and information sharing. According to the definition above, this research made a portal where students can search, study while experimenting and have fun about Indonesian cultures from local content in social science.

2.3 Definition Of Self-Directed Learning

Studying is one of the factor and steps in human life that takes an important role in forming characters and behaviors. [6] The process of learning that is centered on students emphasize the concept of independent studying and one of them is self-directed learning.

Self-directed learning is founded by Cantwell, Archer [6] as a study of process where individuals have responsibility in arranging studies and apply it as well as evaluating the study process. The definition above pictures the internal characteristic where individuals direct and center themselves in their will of their studies individually as well as taking responsibility in studies.

The understanding of SDL is where individuals actively manage the process of studying , shows the internal process owned and practiced by individuals when studying. The ability of individuals in maximizing SDL is not a talent but can be increased through relevant learning programs.

Meanwhile according to Hoban, Sersland, Raine [6] relate SDL with self-efficiency is defined by the point of view of individuals towards their ability in certain academics. Situations like that describe that basically individuals are active participants in their studies.

Based on the above definition, with the existence of edutainment culture portal it is expected that students are able to arrange and experiment in their studying activities without teachers interrupting so that students can decide the scores that they want to achieve in that subject.

2.4 Literature Review

In this research, writers are also searching for referral and comparison with the past research that contains similarity as well as giving the differences. The past researches are as follow in the table.

Table 1: Literature review on edutainment

No.	Title and author	Result	Adoption
1	Willyanto[10] <i>Perancangan Aplikasi E-Education Berbasis Web Dengan Menggunakan Bahasa PHP</i>	E-Education System must be supported by the resource with qualities so that learning teaching process will become effective. They use web based application using PHP Programming Language	Reference on building e-education application with PHP language.
2	Ifan Kurniawan[2] <i>Pemanfaatan E-Education untuk meningkatkan Kualitas Belajar</i>	utilizing e-education as a transport in learning in the field of computer is used in order to help students in finishing problems especially in the field of computer and lecture notes can be downloaded by students freely so that it can increase knowledge and insight of the students	the concept and reference how e-education can increase learning qualities
3	Oka A.S., Widya C and Ilman Z[7] <i>Perancangan sistem edutainment berbasis web di sekolah menengah atas negeri 1 curup kabupaten rejang lebong</i>	A design of an edutainment system for interactive learning that creates student's interest to study. This system combines the element of education with entertainment to erase the feeling of boredom in the students towards the past learning way. This system is designed basing on web so it will ease up the user and utilize system networks available at SMA Negeri 1 Curup.	Reference to make an edutainment system based on web with PHP and MySQL.

4	Sidiq Wahidi[8] <i>Pembelajaran bahasa Arab berbasis edutainment (model ustadz Mohamad Nuaim pada kelas X di MAN Wonokromo Pleret Bantul)</i>	Capturing the edutainment concept practiced by learning arabian language ustadz Mohamad Nuaim version that covers happiness of taught participants, way of thinking, their personal experiences, ability of teachers in teaching, learning atmosphere, creative media, edutainment in learning and evaluation model	Reference on edutainment concept emphasizing in fun student's learning process.
5.	Itsna Iftayani[3] <i>Pembelajaran bahasa arab di MTsN model Parakan Temanggung perspektif edutainment</i>	Teaching learning process that applied edutainment principles.	Reference on teaching learning process using edutainment principles
6.	Zufri. T, Saputra. D, Tjhin. Santo [12] "Desain Portal Edutainment Budaya Indonesia sebagai sarana self-directed learning siswa di tingkat sekolah dasar".	Phase 1 of creating cultural edutainment web portal without implementation on quiz, game or certificate. Software using Flash, PHP.	Design and creation of cultural edutainment web portal.

Based on the above researches, this research is different. In the previous research they only used edutainment concept in teaching learning process, create web-based software for it, and disburse on different subject. While on this research we applied the edutainment concept as a tool for self-directed learning, alternative assessment, and form of edutainment is in a web portal and subject focus on social sciences for Indonesian culture except for research by Zufri[12], this research continue into second phase and observe more on how does it implement self-direction learning and alternative assessment into the web portal.

3. STUDY

3.1 Research Methodology

The methodologies used in this research are experimental methods that will design and build an edutainment web portal. The research is divided into 5 stages: Data collection, portal design, implementation, testing and conclusion. Data Collection is process of gathering information from secondary data such as search engine, journal and book. SIPEBI Portal design are described in a use case diagram as shown in figure 2. Where implementation is creation of the web portal as shown in figure 3. While testing and conclusion are gathered as the web portal are running and tested internally before launched in as a school source nationally.

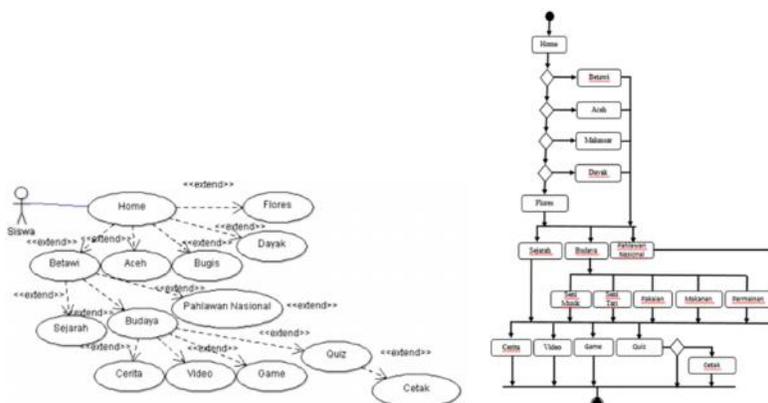


Figure 1. Web portal menu Diagram

Figure 1 explains the stages of using the portal. Students as users will open the homepage from iconic web portal. The homepage provides a button in the form of icon animation that contains Betawi culture, Aceh

culture, Makassar/Bugis culture, Dayak culture and Flores culture. After clicking one of the icons, an animation of the origin of the selected culture will appear and another history, culture and national hero buttons from the selected culture will also appear. If the history button is clicked, an animation story that narrates the history will appear and narration, video, games and quiz menu will be flashed. If the quiz menu is selected, a series of questions that will be answered by the students will appear and by the end of the last question, the total score will be displayed and there is an option to print the score. If the culture is selected, introductory narration animation will appear and another set of music art, dance art, traditional clothes, houses, foods and drinks buttons will appear. After the buttons are chosen, a similar menu as the history button will be displayed.



Figure 2. Display web portal page

Every picture in this page, as in Fig 2, is a moving animation that will display names from each tribe when magnified. The next menu will be displayed once clicked. When the page appears for the first time like shown in fig. 2 there would be an animation of betawi village appearances that was covered by metropolitan city, then there is the traditional house of betawi. After that there is the character si pitung that was running from his house and sees the background with narration and background music. After that, 3 arranged and animated buttons appeared that is history, culture and national heroes. The third picture in fig.2 is a print out of certificate as an alternate assessment after they've done the quiz or game, It will included passing score and level of quiz or game they have passed.

3.2 Result

Based on our observation and study in some national plus and international school for higher elementary level in South Tangerang, $\pm 75\%$ most teacher are used various methods in teaching and learning process especially for those based on technology-enhance learning using Internet educational web portal to enforce self-directed learning. This method emphasize on student motivation, responsibility, and awareness as well as initiative on their own learning process. Students are the center of learning process, where they able to explore and experiment on their learning process, while teacher is facilitator of resources, motivator and generator of main idea in learning. In Teachers part, they provide support, material and resources for fun, interactive and experimental learning through and educational web portal such as BBC, IXL for learning math, English and science subject. While student's part is go to link that given by teacher in computer room to learn and assess their learning on the portal and give result of achievement certificate. Difficulties arise for learning resources on social science related to Indonesian cultural education. To solve the problem this research are generated to create Indonesia Social-cultural web portal applied edutainment concept that is Surya Iconic Pusat Edukasi Budaya Indonesia (SIPEBI).

SIPEBI is a web portal that conceptualized to enhanced students learning self-directly by providing lesson material for Indonesia social-culture knowledge with concept edutainment applying fun, interactive self-directed learning for student's. With addition of alternative assessment for the teacher by printing their certificate of achievement on the lesson they learn as shown in fig.2.

For second phase research in SIPEBI web portal will included Betawi and Javanese culture related to history, traditional clothes, traditional games, foods, traditional art (performing art, music and dance). Learning material of SIPEBI are in the form of audio, video, interactive quiz and game. Every lesson will have a certificate of achievement every time the student's finish each level.

As an alternative assessment, the certificate provides additional assessment tool to cover those students that having difficulties for formal assessment in written or oral. This form of assessment will help teacher to have

additional students work portfolio that will be admitted along with report card as proof of self-directed learning activity.

4. CONCLUSION

- a. This research is done to provide web portals based on Indonesian culture that implement concept of edutainment, where educational and learning is fun, interactive and assess self-directly by students
- b. This research is done to provide technology enhanced learning environment for alternative assessments in social science based on culture with the result that can be printed as a students work portfolio.
- c. This research is to design a web portal that contain video and audio material as well as information, quiz and game to learn Indonesia culture in fun and interactive way.
- d. As second phase research is to add quiz, game and certificate of assessment for Betawi and Javanese before implementation on Go live environment.

REFERENCES

- [1] Goni. I. A. M, "Designing of Portlet-based Web Portals", PHD Disertation University of the Basque Country, Spain,2008, Pg.10
- [2] Ifan. K, Iwan P, "Pemanfaatan E-Education untuk meningkatkan Kualitas Belajar", Proceeding SNATI 2009. UII, Yogyakarta.
- [3] Itsna. I, "Pembelajaran bahasa arab di mtsn model parakan temanggung perspektif edutainment", unpublsh undergraduate thesis, UIN Sunan Kalijaga Yogyakarta, 2010.
- [4] Jiri N., Josef T, "Edutainment or Entertainment Education Possibilities of Didactic Games in Science Education", ICCP Proceeding BRNO Conference, 2007 (Online).(http://www.iccp-play.org/documents/brno, accessed on 29 December 2013)
- [5] Katz.N. R, "Web Portals and Higher Education Technologies to Make IT Personal", Jossey-Bass Inc. 2002, pg. 33.
- [6] Lausen. H, Stollberg. M, Hernandez. R.L, Ding.Y, Han.S, Fensel.D, "Semantic Web Portals – State of the Art Survey", Semantic Web Portal Poject, <http://sw-portal.deri.org/papers/publications/SemanticWebPortalSurvey.pdf>, accessed on 1 May 2014, pp. 1.
- [7] Oka A.S., Widya. C, Ilman. Z., "Perancangan sistem edutainment berbasis web di sekolah menengah atas negeri 1 curup kabupaten rejang lebong", Informatics engineering journal, Bina Darma e-journal, 2013 (Online), (http://eprints.binadarma.ac.id/view/creators/Saputra=3AOka_Albedo=3A=3A.default.html, Accessed on 29 December 2013)
- [8] Sidiq. W, "Pembelajaran bahasa Arab berbasis edutainment (model ustadz Mohamad Nuaim pada kelas X di MAN Wonokromo Pleret Bantul)", unpublished undergraduate thesis, UIN Sunan Kalijaga, Yogyakarta, 2010.
- [9] Utari. S, "Kemandirian belajar: apa, mengapa, dan bagaimana dikembangkan pada peserta didik". Graduate school UPI math journal, 2010 (Online). (http://math.sps.upi.edu/?cat=3, Accessed on 29 December 2013)
- [10] Willyanto, "Perancangan Aplikasi E-Education Berbasis Web Dengan Menggunakan Bahasa PHP". Bina Darma University journal, Palembang, 2011.
- [11] Zainal. H, "Pengertian web portal", www.zainalhakim.web.id/pengertian-web-portal.html (Online), Accessed on 29 January 2014.
- [12] Zufri. T, Saputra. D, Tjhin. Santo, "Desain Portal Edutainment Budaya Indonesia sebagai sarana self-directed learning siswa di tingkat sekolah dasar", Proceeding journal Sentika 2014, Universitas Atmajaya, Yogyakarta, 2014, pp.484-491.