Website Development of Indonesian Art Higher Education Institutions Historical Archives

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Abstract. Art Higher Education Institution in Indonesia has been established since 1947, and ever since has developed in different parts of Indonesia. Indonesia as a country with rich culture and arts, has its own history and characteristics regarding its visual arts development. Prominent names in The History of Art Higher Education Institutions in Indonesia includes names, such as Simon Admiraal, Ries Mulder and RJ Katamsi. They had historical account of establishing Universitaire Leergang voor Teeknleraren (FSRD ITB) and ASRI located in Bandung and Yogyakarta respectively. The goal of this research and development is aimed towards information propagation regarding these historical data and information of art higher education institutions in Indonesia. The project was initiated by Creative Arts Department of Telkom University, which also acts as an art higher education institution. The website development methodology went through several phases, which includes data collections of art higher education institutions in Indonesia, qualitative research that includes interviews and observations of key persons, as well as using Website Generation Model methodology in its development. The preliminary results of this research project informs that the website has perform well in key objectives regarding needs, systems and learning process. In the future it is needed to also research similar projects in Indonesia such as online art database like IVAA (Indonesian Visual Art Archive) which originated in Yogyakarta. The preliminary conclusions of currently ongoing research are that it is necessary to build such online database to hold historical data about the subject, and that the visual aspects of the website have the most consideration for the success of this project. The impact of this research for current development is that the research give way to utilizing qualitative research as well as Website Generation Model in developing better and more attracting websites.

1. Introduction
The significance of the research toward developing website of Indonesian Higher Education Historical Archive is in the sense of information proliferation, where a website has an important role. Moreover, website also serve as an educational tool. To give education to the people and or students regarding important subjects. This is especially happened in MOOC (Massive Open Online Course), where classrooms are moved to online networks. Website is a place where people find information regarding an institution or business. Nowadays, people tend to look at the website first, rather than directly go to the institution or making a call to find more information. Website also serve as a tool to divert public perceptions and also campaigning products or services. Thus, in developing such website, we should comply with existing website generation models and also conducting research connected to the website development.
Previous research conducted by several other researchers has stated the importance of the usability and interaction between students and public with websites or e-learning portals. Moreover, there also the lack of time to assess the quality and effectiveness of the e-learning for the students to create a meaningful interactions. A notes from Lofström stated that teachers generally felt that the greatest problems arose from students is the lack of time and deficiencies in the usability of the technology [1]. Another notes from Woo stated that not every interaction lead to increased learning. Only when interaction has a direct influence on learners intellectual growth, the interaction is said to be meaningful [2]. Other research has used various website generation models for building a website such as HELAM models that is using multi-dimensional approach for LMS evaluation [3]. The opinions in using multiple approach is quite popular as we could also find it in the statement of another researcher such as Salmon that states multidisciplines approach is a demanding endeavour that will not be achieved by learning technologies alone but also involves art, craft and science as well as technology [4]. Websites and e-learnings should not be viewed as a new thing without knowing the fundamentals behind it, a phenomena that is called technopositivist. The technopositivist ideology is a ‘compulsive enthusiasm’ about e-learning in higher education that is being created, propagated and channelled repeatedly by the people who are set to gain without giving the educators the time and opportunity to explore the dangers and rewards of e-learning on teaching and learning [5]. This research position is in accordance to previous research, while also situated itself in providing information that is unique to the problems faced in Art Higher Education Institutions situation in Indonesia, as well as providing quality and meaningful interactions between the website and students or other audiences.

The purpose of this website development and research is to provide historical information related to the advancement of Indonesian Art Higher Education Institutions that should give comprehensive information for the public. Archive related to the establishment, curriculum, and other information should be displayed and become available for the public. Notable alumni, accreditation, lecturers, events are among the information to be gathered and displayed on the website. Among the considerations are to collect and making permission to the related institutions. Research should also be conducted for the historical aspects of the institutions, sociological aspects, and or ethnological aspects. Thus, this projects, is not mere a website development project but also academically based research. After the website development is finished, then the impact of the website should also be measured as to find out the effectiveness of information given and the correlation with the public opinion and perceptions.

The website development methodology is using multidisciplines approach, which includes data collections of art higher education institutions in Indonesia, qualitative research that includes interviews and observations of key persons, as well as using Website Generation Model methodology in its development. The preliminary results of this research project informs that the website has perform well in key objectives regarding needs, systems and learning process. In the future it is needed to also research similar projects in Indonesia such as online art database like IVAA (Indonesian Visual Art Archive) which originated in Yogyakarta. This results has encourage us to state that it is necessary to build such online database to hold historical data about the subject, and that the visual aspects of the website have the most consideration for the success of this project. The impact of this research for current development especially in e-learnings fields is that this research give way to utilizing qualitative research as well as Website Generation Model in developing better and more attracting websites.

2. Methods

Sociological and Technical aspects of the Art Institution and the benefit of such institutions website should be research in a way to give the clue about what information needed in the website. The lecturer from art higher education institutions in Bandung become the informants for this research. The public as informants, involving students, art school students, art institutions, and general public. The data gathered should give an insight of how and what information should be included and perceived in the website. As of the writing of this publications, the process of building the website is still ongoing and right now is in the preliminary study and research stage.

The methodology used in this research is qualitative based methods, with analytical deductive descriptions concluding from general to specific explanatory writings. The data collections include several methods, like literature study, website and art higher education institutions observation,
interviews of key informants, and also documenting of sites and key persons. The research tries to combine the usual approach in developing a website with social research that is usually done in the art and social fields. The projected outputs are more comprehensive and visually appeal website or learning portal that is benefitting the public as well as the art world itself.

Data collections are aimed towards audience segmentation and strategic planning regarding the website. Interviews are targeted to dig data from experts in the field of art education or historian and specialist in the field of website design and marketing.

3. Results and Discussion

Art Higher Education in Indonesia, is a relatively new education field that currently has its own challenges. People still view Art Education inferior compared to science or technological fields. Thus, an educational information regarding Art Education is urgently needed in Indonesia. Arts especially related to creative arts are the indicator of the development of a country. In developed countries, Art and its related fields are thriving. Art related transactions could amount a large sum of money, compared to natural resources transactions that are the backbone of developing countries economy. Natural resources could easily exhaust and it has environmental concern behind not to maximally use its potential. In another side, science and art could benefit from its maximum potential.

Yes, in the early discovery of knowledge, arts and science was indeed a single entity. Arts is considered the skill and knowledge of many fields, such as math, medicine, and others. It was in the recent era (around 18th century) that arts are considered as a separate field. Furthermore, Arts was given a new meaning that relates it to the activity of drawing, painting, and other specific things. But with the advancement of time, people now reconsider to collaborate art, science and technology, giving maximum potentials to creative and knowledge based economy.

The advancement of Art Higher Education in Indonesia cannot be separated from the figures behind it. The first native Indonesian to be involved and contribute to the art advancement in the world was Raden Saleh, his painting could be considered equal to that of Delacroix, and other European painters at that time. Meanwhile, the pioneering Art Education Institution in Indonesia was the Universitaire Leergang van Tekenen en Handenarbeid (University Center for Drawing and Handicraft Teachers) that is located within Technical Faculty, The University of Indonesia located in Bandung which established in 1947. Another pioneering Art Higher Education Institution in Indonesia was ASRI (Indonesian Fine Art Academy) established in Yogyakarta in 1950.

Indonesian Art Higher Education Institutions cannot be separated from the pioneering Art Higher Education in the world such as Ecole Des Beaux Artes in Paris and Germany’s Bauhaus School. The Initiators of Universitaire Leergang were Dutch, Ries Mulder and Simon Admiraal, which admire modernism, especially cubism. The initiator of ASRI, RJ Katamsi was educated in the Netherlands and having the licence to teach arts which is the Middelbare Akte. The years after, The ASRI tends to be more Indonesian approach. While, the Universitaire Leergang (now FSRD ITB) choosing more westernized Bauhaus style approach. This was due to the professors in ITB were educated in Germany during 1950-1960s, following dispute with the Netherlands over that periods.

The pioneering art higher institutions in Indonesia give the opportunity for other institutions to take shapes. This due to the fact that many lecturers that working in the new institutions came from the pioneering institutions. Meanwhile, the pioneering institutions have quotas of how many students could be accepted in an academic year. In Bandung alone, there are many art higher education institutions established after the FSRD ITB. In Bandung there are Seni Rupa UPI (Art Education Program of Indonesian Education University) which focuses on shaping art teacher, ISBI (Indonesian Art and Culture Institute), Creative Arts Program of Telkom University, and Fine Art Program of Maranatha University. Every institution has its own values and distinctive art programs. This information should be conveyed to the public, so public in need of information could be well informed and to make Art Education Institutions could gain better public perceptions.

As of Telkom University Creative Arts Program, the online media has a great share of how students and public alike to know more about the institutions. The study program has used websites and social media to be connected to the general public through online networks. The results of this approach is really big, the program is quite popular among the student candidate from high schools. The program
was a continuation of Fine Art program from Indonesian Telkom School of Art and Design (STISI-Telkom) that was dissolved into Telkom University in 2013. Before the university that focused on ICT and Management subjects take over the institutions, the Fine Art study program nearly collapsed, because lacking of students. Now, the program holds about 300 students, specialising in Intermedia, Painting, and Film and Photography. According to the registrant office, the increase in candidate interests is due to the newly opened specialization towards new media and also the active information displayed in website and social media. Public, especially student’s parents now see the art program not as an inferior study program because of the progression made in the field.

The objectives of the first phase of this research are (1) to make a needs analysis of website; (2) make technology analysis and the preliminary website design; (3) formulate an analysis task against information material. Then it is used as (1) input material about needs assessment of the website, (2) the basis and reference in designing website; (3) input material for the interests of information resources in the form of a website. Website-based information is part of an e-learning that is utilized to (1) send information materials; (2) improve infrastructures; (3) improve the quality of learning; and (4) learning and assessment as well distribute learning material so it can be accessed anywhere and anytime as well anyone [6]. Elements that must be fulfilled in this information resources is (1) using web technology; (2) contents should relate to learning objectives; (3) based on design learning strategies and pedagogical procedures; (d) contains elements that can be reused.

Relating to the above features needed on web services, it is also need to specify (1) lesson information, important notes and schedule; (2) curriculum map; (3) teaching materials such as slides, handouts, animations, audio videos; (4) e-mail and forum communication; (5) formative and summative assessments; (6) management tools for student (records, statistics, student tracking); (7). Links to websites are related internally and useful external like a library, online database, and journal [7].

Perrin and Mayhew [8] stated, another consideration is to overcome problems caused by the limited quality of teaching staff. This learning information could utilize one of two systems learning, namely (1) real-time, teaching directly in need of support Java Chat, Java Whiteboard, Java Projector, and Java Newsticker applications and (2) knowledge-based, using the system as a place of concentration of knowledge with document management applications. This factor was chosen as the strategy in this study. In designing software, it can be chosen from one of existing models, namely (1) Linear Sequential Model; (2) Prototype Model; (3) Model RAD (Rapid Application Development); (4) RAD model; (5) Incremental model; (6) Formal Engineer Method; (7) Generation Model, providing convenience for the desired software [9]. In a manner that the steps taken consist of the four main parts, namely analysis, design, coding and testing.

This system is a universal system model consisting of (1) input, (2) method or the process of transforming inputs into output or products, (3) outputs of products, and (4) feedback mechanisms as stated by [10]. This model is used because it analyzes input sources, that consisted of people, knowledge, material, energy, capital, and finance. For process staging, needs in the form of resources must be identified, along with delivery mechanisms, interactions, navigation, and layout. For staging purposes, output can be in the form of learning materials, resources, and experiences gained by students or website audiences, Figure 1.
For determining the basis for designing website-based learning in this first stage, a survey is conducted. Especially to identify the use of learning methods, content, and skills. Data research was obtained through literature studies, expert review, observation, interview, questionnaires, and documentation. Interview to expert was conducted to be further analyzed by descriptive analysis techniques.

Technology analysis in learning reviewed from the application of technology such as (1) communication; (2) reference to online learning material; (3) testing and assessment; (4) tracking, reporting; (5) organized distribution of shipments; (6) delivery; (7) design and development of expertise. The results of a survey of 114 respondents about the ability to use technology and communication in learning settings obtained 112 respondents (98.24%) who use e-mail in learning. In utilizing social networks in the learning group 61.40% and using Chat rooms is 42.98%. This indicates that students and lecturers in learning have the ability to utilize internal communication media learning.

Database design is the stage of mapping the conceptual model to the database model used. Database design divided into four parts, namely diagrams ER, relation schema, table design, and dictionary data. Entity Relationship Diagram (ERD) is one way to process the database so that the data can be known the relationship between files and techniques. The form of Entity Relationship Diagram (ERD) from the specifications at the analysis stage it can determine the data to be used and stored to support this website-based learning system and can determine interdata relations.

**4. Conclusions**

Based on the results of the analysis carried out, it can be concluded that website generation model used for Art Higher Education Institutions Historical Archive learning can fulfill basic needs in supporting learning activities, namely (1) fulfilling the management of learning material data; (2) fulfill the learning process constructively; (3) presented with learning material interactive; (4) can be downloaded by
students, and displays material in the form of link; (5) fulfill the learning process inquiry, which is presented with a search facility, discussion forum tools, and active contributions (comments); (6) fulfill the evaluation process so that levels can be known student mastery of learning material; (7) material made in the form of animation by using macromedia flash, video, and text. Form of system design, namely (1) design process with flow charts and flow diagrams data; (2) database design with Entity Relationship Diagram; and (3) interface design using GUI design. Needs analysis shows the web-based learning process meets needs (1) management of theme, topic and sub topic data; (2) present learning material in the form of writing, presentations, and links; (3) display interactive learning media; (4) material search (search); (5) providing a means of discussion between lecturers and students and between students; (6) provide a means for users to make active contributions; (7) management of problem training and evaluation data.

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