

Development of the Museum Using Augmented Reality to Build Cultural Awareness

Koranarin Sariya

Koranarin Sariya, Prakob Koraneekita, Jaitip Nasongkhla

— *Review of* —
**Integrative
 Business &
 Economics**
 — *Research* —

ABSTRACT

Development of the museum using augmented reality to build cultural awareness was developed at the Institute to conserve the cultural heritage of the community, society and nation successor and so on. For 20 years ago, Thailand was a social trend in building and supporting the establishment of a variety of museums and many more. One of the local community and learn the value of cultural heritage, the identities of people in society that are likely to be lost to the local growing. Along with the public and community benefits, and access to more resources under a revised at any time. An agreement to maintain the background, cultural forms and one of them is to gather supplies evidence that is meaningful to the lives of people from the past to the present which keep to establish a museum, city museum, local museum and museum of community increased, but the operating of many museum still obstacles and experiencing in entire budgets management, organized exhibition, stories-presentation and interpreting the meaning of objects, including knowledge management to the attention of the tourists there were not many. For this research the researchers chose to build cultural awareness. The Development of the museum by using augmented reality on the 12 months for Merit using augmented reality AR: Augmented Reality Technology by Marker to highlight AR Engine submitted in the form of video or Heet cultural twelve and fourteen to make cultural awareness.

Keywords: Museum / Augmented reality or AR / Awareness in cultural values / 12 months of merit

PREFACE

Thailand has started the museum for over 140 years, so the museum is not new in Thailand. But the development of the Museum in Thailand has gradually and a concentration of form and content is high. The recognition of the importance of museums in Thailand not only are the prevalent amount of thought. Museum is just a collection where keeping valuable and vital to the nation and the monarchy museum is not a boring place to visit, in fact, the museum was established in the study of foreign matter. That is a private educational institution which very valuable in but only museum in the country of Thailand where does not present a major museum. In ways that meet and a presentation on the subject, far to the needs of the people, the community and society.

The study of data analyzed from both documents and websites, as well as attend seminars on various museums, such as the establishment of the museum management problems, including the status of museums such as folk museum, temple museum, private museum, museum in an institution and another, there were found around 900 museums in Thailand. It's located in Bangkok and around there around 100 museums (Siriporn Srisinurai, 2008). The establishment was found by an old duty of main institution of the Fine Art Department which operating to control and duty for 400 museums through the country

meanwhile there are another museum controlled by the Bureau of Thai Royal House Hold such as the Vimanmek Mansion, the royal villa, the museum of grand palace and the museum of King Rama VI (Sanam Chandra Palace), Nakhon Phrathom Province. More over, there are the Office of Knowledge Management and Development – OKMD where are new management for the museum. In nowadays, the national museum is roled to in Thailand. It is governed by a conservation of the national heritage and local level as well as the people in society can be pursued the entertainment and academic widely. Thailand operates a museum for more than 140 years since the establishment of the exhibition hall of the King's Mongkut in reign IV thus taking diplomatic stratagem. To show that the Western Nations, our country has a civilization not barbarous. The National West understands yet The museum operates the his majesty King's Mongkut. It has developed into the museum for the public and the national museum at a later time. In the past time, the national museum had roled as the primary agency of the museum. Thailand and the agency as a tool to communicate and meet policy guidelines of state of Thailand which related the culture in point of the main national society such as a background of Thai people, a background of culture and art of Thailand and etc.

Museum Serve as a place of culture which serves to preserve the cultural heritage of the community. Serving as a point of cultural and academic resources. Opportunities to participate in the activities of the museum that contributes to support education and facilities for organizing cultural events and activities. This is why it can be said that the museum can be developed a sense of awareness, awareness of local culture and traditions. The local museum has a model that is not limited depending on the type of cultural objects or things like that show is. The principle is Collecting and exhibiting archaeological artifacts appliances. Cultural objects including knowledge, wisdom exists or ever existed in the community or the local area. (Prapai Wiriyan's Foundation, 2005, Apinya Boasaraong, 1996).

Embellish reality or AR. Information technology has the meaning given to objects or places really. Beginning with the release of information on various aspects of three-dimensional positioning system, or GPS. Remember, your system will actually create more objects existing in both three-dimensional and other information. That allows users to have greater insight. Or to respond this makes it even more experience and perception of real objects or environments that are more up front. Creating virtual reality (AR) to promote learning in museums such as tourism. Take photos, which can be applied to historical sights. And museum (Hibberd, R., Johnson, A., To D. & Vora-Palet, S., 2012).

Awareness (Awareness) cultural values. Awareness is the minimum of emotional state means a state of mind is the relationship of consciousness and attitudes expressed about wills awareness, understanding, a sense or responsibility for any event one event. The external factors as stimuli.

Factors that affect awareness

1. Knowledge and understanding of culture
2. Values and respect for culture
3. Attention to education. And cultural heritage of Thailand
4. Activities to raise awareness of the culture

Elements that cause awareness

1. Composition of perception or belief
2. The element of emotion
3. Behavioral elements (Brackler, 1986, Bloom, 1971, Good, 1973 and Banks, 2002)

12 months of merit**(tradition for making merit within 12 Months)**

12 months of merit refers to the tradition of philanthropy each month of the 12 months in Thailand known as Isaan. "Canal heat twelve, fourteen," which practiced since ancient times. The Buddhist monk, arts, crafts and foods are an important part of the ceremony's differences in each tradition. It was a unique tradition of the Northeast Thailand which truly represents the eastern area, which is located to the northeast of the country, with one in three areas of a plateau. It consists of 20 provinces including Nakhon Ratchasima, Buri Ram, Chaiyaphum, Khon Kaen, Kalasin, Maha Sarakham, Mukdahan, Yasothon, Roi Et, Loei, Bueng Kan, Nong Khai, Surin, Si Sa Ket, Sakon Nakhon, Udon Thani and Ubon Ratchathani.

1. THE PURPOSES RESEARCH**General purpose**

To develop a museum model by using Augmented Reality and Field Trip Learning to build a cultural awareness for graduate students.

Particular purpose

1. To create a museum model using Augmented Reality, AR to create knowledge and awareness of cultural values for graduate students.
2. To study an effect of museum model using Augmented Reality, AR to create knowledge and awareness of cultural values for graduate students.
3. To present a museum model using Augmented Reality, AR to create knowledge and awareness of cultural values for graduate students.

The Definition of words

National museum or a museum or established place to preserve objects that made up by human in term of form: antique, science, art and history as an exhibition that people can visit as a permanent or a temporary museum. The national museum exhibitions are usually made to the public for the purpose of leisure studies that show the pride of the local attractions.

Augmented Reality or Virtual Augmented Reality (AR: Augmented Reality Technology). It's a technology that combines the real and virtual world created by merging together via software and connected devices, which creates data that is more data as components on the virtual world such as graphics, video, three-dimensional shapes and letters annexed to overlay images on the camera in the real world.

Cultural awareness including with respect to rejoice sensitive to attitudes conducive benefit the belief patterns of living practices and tactics in solving problem of persons from the cultural.

2. SCOPE OF RESEARCH

1. Development of the museum using augmented reality (Augmented Reality, AR) to create knowledge and awareness of cultural values for graduate students, researchers developed for student's graduate technologist. Innovation and education in the Faculty of Education, university of the state.

2. The sample used in this study consists of 2 sample groups.

2.1 The sample for the study using a model based on museum by museum originally intended to build knowledge and awareness of cultural values for graduate students, including graduate students. Technology and Innovation Studies, Faculty of Education, Buriram Rajabhat University and graduate students in Cambodia, Faculty of Education, Buriram Rajabhat University.

2.2 The sample for the study of the utilization patterns museum using augmented reality: AR to create knowledge and awareness of cultural values for graduate students, including graduate students of Technology and Innovation Studies, Faculty of Education, Buriram Rajabhat University and graduate students in Cambodia, Faculty of Education, Buriram Rajabhat University. The samples were the graduate students of Technology and Innovation Studies, Faculty of Education, Buriram Rajabhat University enrolled in the course 1032101 (Educational Innovation and Technology Subject) for 45 persons. Technology and Innovation Studies, Faculty of Education Buriram Rajabhat University enrolled in the course 1032101 Educational Innovation and Technology for 43 persons, the reason for choosing the sample are as follows.

1. This is the Faculty of Education under the government command which is curriculum for Technology and Communications for Education.

2. This is a right place for the cultural knowledge by a museum located in schools.

3. There are graduate students in a proper gear and tools prompt to learn.

4. The results of the research carried out continuously because the place where the researcher works in. The place is very familiar with the environment, and so are familiar with the environment as well, and can store data more deeply.

3. Variables

3.1 Independent variables were developed using models museum augmented reality. To build cultural awareness. For graduate students.

3.2 The dependent variable is

3.2.1 Behavioral knowledge

3.2.2 Awareness of cultural values

3. PROCESS RESEARCH

The research was divided into 4 stages as follows:

The purpose of the research

Step 1: was to develop the concept of the museum layout using augmented reality to build cultural awareness. For graduate students in the first phase of the research is to study, analyze and synthesize document data and research related to the theme Museum using augmented reality to build cultural awareness. For graduate students, which consists of the steps of the museum layout using augmented reality to create cultural awareness. For graduate students Concepts and theories and research related to adopt as the basis for

determining the composition and procedures of the museum layout using augmented reality to create cultural awareness. For undergraduates Museums and element analysis model using augmented reality for undergraduates using Factor Analysis.

Step 2: Creating a museum using augmented reality to build cultural awareness for graduate students using augmented reality to create cultural awareness. For graduate students performed prototyping model of the museum using augmented reality to build cultural awareness. The data obtained from step 1 to create a prototype model of the museum using augmented reality to build cultural awareness. For undergraduate students, graduate students, the concept of developing was a form of teaching, focusing on the process step with the system (System Approach) and show reciprocity.

Step 3: Study results of museum format using augmented reality. To build cultural awareness for graduate students

Step 4: Proposed Model Museum using augmented reality and learning to build cultural awareness for graduate students Graduate Students Certification Forms Museum using augmented reality to create cultural awareness. For graduate students analyzed the data using the average opinion on the suitability of the model. Comments and suggestions from experts at the museum format using augmented reality to build cultural awareness. For graduate students developed by the suitability must be between 4.00 or higher to be considered a form of instruction developed are reasonable and can be applied to reality.

4. DISCUSSIONS

Development of teaching

The process of developing a museum used augmented reality to build cultural awareness. For graduate students can be divided into two aspects: (1) form Museum using augmented reality to build cultural awareness. For graduate students, and (2) the elements of style museum using augmented reality.

Student groups had an average score of awareness of cultural values in the experimental realization understanding and recognition of the differences and similarities between cultures in the South East among the highlights of the cultural mainstream acceptance in the culture of others (Enlightening Power Group Model) and a group of people understand their own culture in the context of their social and cultural principles (Share Power Model) and knowledge. Understanding and attitudes needed to live in a society where ethnic and cultural diversity, higher than the average of awareness of cultural values before trial, a statistically significant level 0.05. The results showed that the perception of cultures allows adaptation to return to the culture of their former faster and maintain their identities and receiving a new culture that people can combine identity old culture and new culture with the culture of individuals like myself is able to adapt quickly when they returned to their original culture. The mean score of awareness of the cultural values after the trial were ($X = 4.65$, $SD = 0.35$), higher than the average of awareness of cultural values before trial ($X = 3.75$, $SD = 0.33$) were significantly statistically level when comparing 0.05 which analyzes the process of teaching and learning in a museum, using augmented reality and learning field trip to creating cultural awareness. For graduate and Learning Field Trip to creating cultural awareness which consisted of the average score of awareness of cultural values increased after the experiment.

5. SUGGESTION

Suggestions for bringing research results to the user

The elements of museum form used augmented reality to build cultural awareness for graduate students. These can be adjusted according to the situation, and flexible deployment characteristics of learners and classes to fit and to achieve the objectives in teaching.

The Suggestions for research in the future

In this research focuses on the effect of using a museum used augmented reality to build cultural awareness for graduate students, the research is comprehensive and can be utilized more should have studied the effects of variations museum using augmented reality to create cultural awareness for students such as elementary school.

REFERENCES

- [1] Panida Tansiri. (2006). "Illusion as real". Bangkok University
- [2] Titsana Khaemane. (2002). Science Teaching: cognitive learning process effective. 2nd Edition. Bangkok: Chulalongkorn University Press.
- [3] Mongkol Lha Daungdee. (2009). "With the information system on tourism. A real extra on phone Mobile. "Software Engineering Chiang Mai University.
- [4] Lek Foundation - Prapai Wiriyan. (2005). October. (The interview was published in the media, the power of the 14th, 3rd edition during July - September. Journal of Education University, 12 (1), 44-49.
- [5] Siriporn Srisin-Urai. (2007). Museum records: lessons from research and development of the museum. Bangkok: Sirindhorn Anthropology Centre.
- [6] Sanit Julpol and Natthawee Uttakrit (2013). "The reality techniques to enhance the presentation of info a lot." Department of Information Technology Management, University of Technology.
- [7] Somsit Jitsadhaporn. (1998). Trends Center Media teaching electronic (CAT). Burapa University.
- [8] Somsit Jitsadhaporn. (1991). Technical education field. Songkhla's Project management for study. srinakharinwirot University, Songkhla Campus.
- [9] Apinya Buasuang. (1995). The role of the museum's local. Documents seminar on Local museum in Thailand.
- [10] Banks, J. (2002). An introduction to multicultural education. (3th ed.). Boston, MA: Allyn & Bacon.
- [11] Bloom, Benjamin S. (1971). Handbook on Formative and Summative Evaluation of Student Learning. New York: McGraw-Hill.
- [12] Breckler, SJ, and Greenwald, AG (1986). Motivational facets of the self. In R. Sorrentino & ET Higgins (Eds.), Handbook of motivation and cognition (Vol. 1). New York: Guilford Press.
- [13] Good, CV (1973). Dictionary of Education. New York: McGraw-Hill.
- [14] Hibberd, R., Johnson, A., To, D. & Vora-Patel, S., (2012) Engaging the 21st – Century Learner: Using Augmented Reality to Increase Student Engagement and Student Achievement in an Inquiry-Based Learning Environment. Retrieved December 2, 2012.