Repository Model for Intangible Heritage "The Malay Scenario"

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Abstract— **Culture heritage is identity of country, community and group of people. Intangible culture is a common practice, in the community. Continuously re-created and transmitted. However, culture can only have continuity if people enjoy the conditions to produce and re-created. This paper try to identify the factor of contributing archiving intangible heritage before develop a model as a guideline to archive culture heritage especially intangible heritage via ICT exploitation. This standard model as a kick-start of intangible study and also as guidelines for culture institution in Malaysia to archiving their intangible heritage and make it available for other researcher and the future generation.**

Keywords—**Intangible Heritage, Archiving Factor, Repository Framework.**

I. INTRODUCTION

Since Malaysia is a developing country, various factors will affect the heritage of Malay's culture. Globalization, modernization, urbanization, mass media, internet access, increase of opportunities in the job markets, and various development plans taken up by the government comprise a great danger for the variety of human culture [1]. Many cultural observers around the world believed that local, regional, even national traditions especially Intangible Heritage(IH) were devalued or endangered or both [2-3]. Since intangible heritage is a kind of tacit knowledge, the major problem is how to archive and how to preserve things that cannot be seen. Dyson statement that the development of information and communication technologies (ICTs) globalised human knowledge and it is now possible to make the whole human memory accessible, to every individual and to reproduce it exactly in different places is strong motivation of this research [4].

In Malaysia, although Culture Department of the Ministry has long been in existence since 1969 under various Ministry, but non preservation work for IH [5].

II. BACK GROUND

Guoxin Tan and Danis Pitzalis proposed Ontology-Based Knowledge Modeling to archive IH via ICT. This technique introduced ontology technique using CIDOC Conceptual Reference Model to perform demographic search of IH [6-7]. This technique very accurate and efficient in searching but in term of archiving IH, just certain type of it can be implement with, such as costume or traditional music. Another type to archiving IH is using X3D and Virtual Reality Technique. This technique has implemented for development of Digital Museum of IH in China [8-9]. Researchers altered the actors of IH including the surrounding of the heritage. For example to model the Palace Dance researcher have to model the surrounding of the dance taken places in the palace as well as the audiences, music and also the king's position when the dances performed [10-11]. This technique suitable for certain domains of intangible heritage such as Oral Traditions And Expressions, Social Practice Rituals and Festive Events and Performing Arts. For domain of Knowledge Concerning the Nature and Craftsmanship cannot be modeled exactly due to it is a human skill. Another technique is to conduct dance training using robotic by applying Multimodal Information

Presentation Method[12]. This method is consider self-learning for traditional dance training by introducing an image display on mobile robotic and active vibro-devices and suitable for only a type of dance[13]. The robot cannot response to another type of music and the machine have to re-programmed to able teach another type of dances [12]. On other hand, Cheng Yang using 3Dimention Motion Picture (3D Motion Picture) to archiving Chu Dance of China. He used reactive behavioral engine to create the model's motion by implemented rule based behavior engine [11]. It is very suitable for archiving Performing Arts.

as performing arts, craft-making techniques, folk custom and ritual rites as well as language and literature [5, 21]. Hence, this research will seek uncover the perceptions of information professional regarding the development of the intangible culture repository model. Due to the professional information gathering, this research will identify the factors contributing the development of repository model for intangible culture heritage. Most nations have developed some form of archives documenting intangible cultural heritage, but they generally lack the resources adequate to keep up with cataloguing and preservation functions.[2, 18]

III. PROBLEM STATEMENT

The intangible cultural heritage of an indigenous people or other cultural community reflects and embodies its history, values and beliefs, in short, its cultural and social identity. [14-15]. For many populations including Malaysia which is consisting multi-racial population, the intangible heritage is the vital source of an identity that is deeply rooted in history [16]. In spite of that, by exploitation an ICT technology and implemented another methodologies numbers of country in the world doing research to safeguarding their intangible heritage[8] . A framework are needed for proper safeguarding or archiving the intangible heritage, but unfortunately there is no exists any framework that can serve the participatory states, providing as much assistance as they wish to safeguard their tangible nor intangible cultural heritage [3]. It was seem like UNESCO Convention 2003 believe that intangible cultural heritage is truly endangered [3, 17].

By the mid-1990s, international awareness and dialogue about the consequences of globalisation had increased dramatically[18]. Many cultural observers around the world believed that local, regional, even national, traditions were devalued or endangered or both [2, 15]. The observable example of intangible heritage that is truly endangered is languages [2]. More than 3000 languages in the world will not survive in the next two centuries. (Rieks Smeets, 2004). This is because of 96% of the world's languages are spoken by only 4% of the world's population. (Rieks Smeets, 2004). The number of languages actively spoken in the world today, as compared to the last century, also shown as a symbol of the danger. The world has lost literally thousands of linguistic communities meaning that the world also lost epic stories, tales and ritual [19]. Besides languages, numbers of music, dance, rituals performances, culinary and occupational traditions, craftsmanship also have been lost or decline (Richard Kurin, 2007). As well as other country, globalisation, mass media, internet access, increase of opportunities in the job markets, and various development plans taken up by the government will affect the culture heritage for Malaysia [20]. On the other hand, global mass culture raised the question of whether valuable traditions, practices, and forms of knowledge rooted in various societies would survive the next generation. Safeguarding and archiving the culture heritage is a huge problems since till now since there is no specific centralized inventory system of intangible heritages being done in Malaysia [21]. The available materials on ICH are only in the appearance of documentation of several and limited ICH resources such

IV. OBJECTIVES OF THE PAPER

The objectives of this paper are examining the following issues:

- To analyse preservation, and ensuring the continuity and continued relevance of intangible culture heritage in the community using ICT technology.
- To develop knowledge repository model of Malay Intangible Culture and Heritage of Malaysia as well as:
    - To identify the factors contributing the model
    - To identify the problems regarding archiving intangible heritage
- To evaluate how crucial the development of knowledge repository model of intangible heritage.

V. RESEARCH SCOPE

This research will be implementing for the culture heritage of Malaysia in the scope of intangible heritage. Six government culture institutions comprising Heritage Department, National Art Gallery, National Craft Institution, Ministry of Information Communication and Culture, National Archive and Malaysia Museum Department will be involve in the survey

VI. LITERATURE REVIEW

Numbers of researcher doing research on archiving culture heritage. Some of them developed heritage tracking using Google map and remodeled the heritage using virtual reality technique to archive the tangible heritage[22-23]. Meanwhile other researcher using Terrestrial Laser Scanner (TLS), Point Cloud and Virtual Reality to archive the artifacts [24]. Implementation of X3D, Virtual Reality Technique and Realism Animation using CAD software also become popular trends in archiving intangible heritage [25-28].A few projects such as Bayon Temple in Angkor Thom, Cambodia or St Laurentius Church, Italy or The Koguryo Mural Project are developed using those techniques [14, 29-30]. In the mean times very less of them doing research on IH. IH is legacy from the past, what they live with today and what they passed on to future generation [31]. The most crucial issue of IH is how to archiving the heritage itself while the culture is intangible. Furthermore there is no exists any framework that can serve the participatory states, providing as much assistance as they wish to safeguard their tangible nor intangible cultural heritage [3].They try to exploit ICT

technologies in archiving intangible heritage instead of transmit manually from generation to others. In the Table 1.0 below are the summary of archiving intangible heritage using manual and ICT technologies exploitation.

TABLE I
Related Study

No	Technique/Model/ Framework	Apply/Domain/ Application	Reference
1	Ontology-Based knowledge modelling. Using ontology technique to perform demographic search of heritage data.	Apply in searching. Using CIDOC Conceptual Reference Model. For example Project to preserve the Dragon Boat Festival in China. The REACH Greek National Project.	- [6] - [7]
2	X3D and Virtual Reality Technique and development of Digital Museum of Intangible Heritage	Sample project is the development of Digital Museum of Intangible Heritage in China. Develop the character using VR technique and provide learning facilities.	- [8] - [9] - [11] - [10]
3	Multimodal Method For a Dance Training System (Japan)	Multimodal information presentation method for basic traditional dance training by introducing an image display on mobile robotic and active vibro-devices. Another type of dancing robotic is implement the Sarsa algorithm	- [12] - [13]
4	3DMotion picture – by constructing model of traditional dancer with traditional costume	For dance domain only- constructing and modelling the dancer with traditional costumes. Apply on Chu Dance Project in China.	- [11]

VII. METHODOLOGY

According to UNESCO Convention 2003, there are two perspectives to conservation of intangible culture heritage [32]. The first one consists of transforming the intangible into tangible and preserves it for future generations in a field format, without losing its original essence. The second one is to keep the intangible alive in its original context and transmit it to the future generations through oral traditions [15, 32].These approaches are complementary. This study will exploit Delphi technique and adopted exploratory survey method to transforming the intangible to tangible and preserves it for future generation. An exploratory study is performed when researcher has little knowledge about the situation or has not enough information on how similar problems or research issues were solved in the past [33]. The reason of the method chosen due to Delphi technique is a method of obtaining and inform consensus in some subjects [34]. Few steps of the methodology and expected outcomes of this research are listed in the Table 2.0 as follows:-

TABLE II
Research Methodology

No.	Methodology	Expected Outcomes
1	Literature Survey	• List of domain of intangible heritage • Factors to contributing archiving • Literature subject mater expert • Significance of the study • Background of the research
2	Expert Panel	• Confirm the contributing factors toward the model • Confirm the questionnaire • Construct conceptual model
3	Propose New Model	• Construct New Model • Benchmarking with existing model • Create hypotheses
4	Survey Questionnaire	• Data Gathering from despondences
5	Data Analysis Evaluation	• Evaluation the hypotheses • Construct and proofing mathematical formula

VIII. SIGNIFICANCE OF THE STUDY

The paper will not be reformatted, so please strictly keep the instructions given above, otherwise it will be returned for improvement. Please upload your paper in PDF file through the Conference website under Paper Submission menu. Papers sent by e-mail will not be processed. This research is an exploratory study on proposing knowledge repository model for intangible culture heritage preservation. Hence this study will provide the fundamentals for further research in intangible heritage. The result of this research will be contributed new knowledge regarding archiving intangible heritage and as a useful indicator to take into account in preserving intangible heritage or intangible study. This outcome of this research will allow preserving the intangible heritage in proper manner and as well as user guide systematically in archiving the heritage based on ICT perspective. As exploratory studies, therefore, this is the main reasons why we have chosen to carry out the research in this area, and this will underscore the importance and the novelty of this research.

IX. RESEARCH CONTRIBUTION

The main goal of this research is to build a standard repository model for archiving intangible culture heritage for Malays. This model is a user guide for intangible culture preservation in this country and it as a starting point to assemble ICT structure for intangible studies. Beside this, the result of this research also as a guideline to culture agencies to archiving their data which some of them known as intellectual properties. The compilation of Intangible Malays Culture and Heritage will convert into digital device and inventoried, where it will be easy access and refer from any places which internet can be access for the next generation. The availability of this resource will positively affect the Malay cultural

preservation goals and ensuring the continuity and continued relevance of culture in the community.

X. CONCEPTUAL MODEL

The aim of this research is to collect factors toward developing a repository model in archiving intangible culture heritage. In order to develop the conceptual model, the literature on archiving intangible heritage or tangible heritage all over the world was reviewed to identify the factors. This conceptual model is referred on previous researcher in establishing National Digital Culture Heritage Repository of Malaysia (NDCHR) even though this study is exploratory study. She identified four factors such as technology factor, human factor, Governance factor and content management factor to establishing the NDCHR [20, 35-36]. The factors collected by Zuraidah is take in to account tangible and intangible culture heritage but not all type of intangible heritage can be archive using this model due to some intangible heritage needed the specific places to perform. From the literature review, many more factors in archiving intangible culture heritage must take into account such as the type of the intangible heritage itself [37], [38]. In this research, six factors were identified in developing the purpose model. All factors must take into consideration to archiving the intangible culture heritage. Failure to address these factors accordingly will result in tremendous impact and risk inefficient resources discovery, poor accessibility and the most intolerable risk to lost the nation culture heritage [20, 35]. These seven factors will anticipate as main core in archiving intangible heritage. The rationalizations of those factors are as follows:-

- Human Factor: The ability of artisan or practitioner to continue transmitting the intangible culture heritage such as language, art and other culture to another generation. Information Technology: Focus on the suitable technology use, relevant to guarantee the availability, reliability, sustainability pertaining the retrieval and maintainability of the archiving of intangible heritage.
- Information Communication Technology Factor – Focus on type of technology will be used in archiving IH. This is including the methods to transform intangible to tangible culture before archiving process.
- Governance Factor: To ensure that local authority provide support in term of archiving intangible heritage. The support are includes specific policies, standard or procedure, funding and commitment of the culture institution towards archiving.
- Legal/ Policy Factor: Legal and policy is to protect the human right against piracy and intellectual properties right. Legal and policy is not just produced by local government but also from international organization such as UNESCO.

- Religion Factor: To identify that religion is one of the factors of IH preservation. For Malay IH of Malaysia, sometimes religion and IH practice are contradiction.
- Geographical Factor: To ensure that the intangible culture based on geographical still alive or relevant for preservation.

XI. CONCLUSIONS

A Knowledge Repository Model for IH is a framework to archiving IH using computerized system where data can be search and quickly retrieved. The knowledge will increasing based on time so that the repository should have a scalable and expandable architecture that works well under the current experimental scale as well as for future multiple domain, multiple type of data, multiple knowledge structure integration. The main goal of this research is to collect the factors that contributing archiving of IH. The compilation of Intangible Malay Culture and Heritage will store in a digital device where it will be easy access and refer from any places which internet can be access for the next generation. In conclusion, it is the main thesis of these researches those new approaches to develop a standard model for knowledge repository for the Malay's intangible heritage and culture in Malaysia and make it available for other researcher and the future generation.

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