Preserving Cameroon's Cultures and Traditions (CAMCT)
Using App and Cloud Computing
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ABSTRACT

In today's world, people are addicted to their mobile devices due to its interactive features. Multimedia plays an important role on why people keep using their mobile technologies to gather information through the combination of text with video, animation, audio, graphic and virtual reality. This study aimed to develop an app and use cloud computing for storage. This app will greatly help in disseminating consistent information from one generation to another. Also, it will boost cultural tourism and innovate museums as tourists and locals will enjoy the use of this app while knowing everything about Cameroon. The methodology used for this study was Rapid Application Development (RAD) designed to provide quick software methodology that involves iterative development and quick construction of prototypes.

KEYWORDS

Cultures and Traditions, Multimedia Elements, Apps, Cloud Computing

1   BACKGROUND

Cameroon is one of the countries with a very rich and diverse cultural heritage. Locals are very adaptable in technological trends as well. Blending cultures and traditions will make people of Cameroon known to their competitiveness and advancement in using technologies.

Culture is defined as "the characteristics of knowledge of a particular group of people, encompassing language, religion, cuisine, social habits, music and art [1]." Cameroonians have different cultures inherited from their ancestors. They are categorized as expressions of culture which include people, languages, music, cuisine, customs, religions, arts and literature among others.

Mobile technology changes people's lives. They are dependent because of its portability, convenience, and ease of use. Since young people today are adept to technology than learning their culture in a traditional way like making observations and reading books, this study was conceptualized to digitized access to cultures of Cameroon people, to be more accessible and shareable information through the use of an App.

The idea of using cloud computing is another good idea to adapt with the innovative technologies. Cloud storage is an online space where we can store data. Some of its features include (a) all data is stored outside of the network, (b) it can be accessed over the Internet or through built-in synchronization tools, (c) data can be accessed from any device and location by authorized users, and (d) it is based on virtualization technology [2]. Because of the aforementioned features, sharing data with others is easier than ever, making it perfect for globalized world.

To have an indebt understanding of the content of Cameroonian Cultures and Traditions (CAMCT) App, gathered expression of cultures were transformed using multimedia. To access users must download CAMCT application to their mobile devices.

1.1   Related Studies

The Cultural Me is an app that helps people to learn about the arts and culture as they would learn new language [3]. The researchers' problem statement is *"Curious people need a way to learn about their interest areas in the arts and culture because they want to increase their knowledge"* is at par to the objective of this study.

CultureGuru is another mobile app with aims to serve as platform which reminds users of traditional Chinese festivals, by digitizing all necessary cultural information. The main reason for this app is to bring cultural awareness to the users [4].

Moreover, Rajasthan app features a glimpse of forts and palaces, temples among others. It has a collection and more 80 plus pictures, music and videos across 7 cities in Rajasthan [5].

The above mentioned studies were very helpful in conceptualizing and developing the CAMCT app. Cameroonians will have accurate and consistent information dissemination. Youths and future generations will not lose their values, cultures, and history.

1.2   Objectives

The study has an objective, to develop a CAMCT App that uses cloud computing to preserve the cultures and traditions of Cameroon. Specifically, it sought to achieve the following:
1. To determine the different cultures and traditions in Cameroon,
2. To determine the level of likeness of the features of multimedia elements by the end-users and
3. To determine the perceived level of benefits of the end user using the CAMCT App.

1.3   Significance of the Study

The success of CAMCT App set the pace for African countries to follow as it will serve as a model until we can build a new App with the vision that is to preserve African cultures and traditions. CAMCT will be of great help to disseminate consistent information from one generation to the other. Also it boosts cultural tourism and innovate museums. Tourists and locals will enjoy the use of the app while knowing everything about Cameroon cultures and traditions.

2   METHODOLOGY

Rapid Application Development (RAD) is an agile project management strategy popular in software development. The key benefit of a RAD approach is its fast project turn around. This rapid pace is made possible by RAD's focus on minimizing the planning

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stage and maximizing prototype development. This results in greater efficiency, faster development, and effective communication [6].
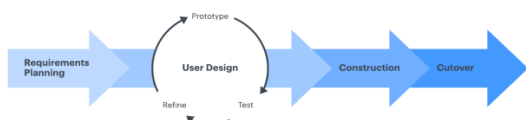
There are four main phases of RAD:

Figure 1: Rapid Application Development Methodology

Phase 1: Requirement Planning: Where planning scoping meeting take place. During this stage, developers, clients and team members communicate to determine the goals and expectations of the project, as well as the current issues that would need to be addressed during the building phase.

Phase 2: User Design: Once the project is scoped out, it is time to jump right into development, building out the user design through various prototype iterations. During this phase, clients work hand in hand with developers to ensure their needs are being met at every step in the design process. This is where the user can test each prototype of the product, at each stage, to ensure it meets their expectations.

Phase 3: Rapid Construction: takes the prototypes and beta systems from the design phase and converts them into the working model. The software development team works together during this stage to make sure everything is working smoothly and that the end result satisfies the client's expectations and objectives. This third phase is important because the client still gets to give input throughout the process. They can suggest alterations, changes, or even new ideas that can solve problems as they arise.

Phase 4: Cutover: This is the implementation phase where the finished product goes to launch. It includes data conversion, testing, and changeover to the new system, as well as user training.

3 RESULTS
3.1 Cultures and Traditions in Cameroon
The CAMCT app can be acquired using QR code or by downloading the said application, the information is stored in the cloud storage. In the CAMCT App, cultures and traditions are categorized according to: People, Languages, Music, Cuisine, Customs, Religions, Art and Literatures, Beliefs, others.

3.2 Level of Likeness on the Features of Multimedia Elements by the end-users

Table 1 shows the level of likeness of the features of multimedia elements by the end-users, the overall weighted mean is "Very Much Liked". This implies that the different features of multimedia were effective and interactive.

Table 1: Level of Likeness of the Features of Multimedia Elements

Multimedia Elements	Mean	Description
Movie Clips	4.48	Very Much Liked
Audio/Music	4.54	Very Much Liked
Animation	4.35	Very Much Liked
Graphics/Images	4.48	Very Much Liked
Text	4.24	Very Much Liked
Overall Weighted Mean	4.42	Very Much Liked

3.3 Perceived Level of Benefits of the end users using the CAMCT App

Table 2 presents the level of benefits of the end-users was individually "Very Much Beneficial" for overall weighted mean of 4.40

Table 2: Level of Likeness on the Features of Multimedia Elements

Perceived Benefits	Mean	Description
Portability	4.41	Very Much Benefitted
Accessibility	4.39	Very Much Benefitted
Learnability/Awareness	4.46	Very Much Benefitted
Interactivity	4.35	Very Much Benefitted
Shareability	4.47	Very Much Benefitted
Overall Weighted Mean	4.40	Very Much Benefitted

4 CONCLUSIONS & RECOMMENDATIONS
4.1 Conclusions
Based on the results of the study, the following conclusions were drawn:
1) The cultures and traditions were identified and categorized according to: People, Languages, Music, Cuisine, Customs, Religions, Art and Literatures, and Beliefs.
2) The level of likeness of the features of multimedia elements by the end-users was "Very Much Liked".
3) The perceived level of benefits in using CAMCT app was "Very Much Benefitted"

4.2 Recommendations
Based on the results and conclusions of the study, the following are recommended:
1) The implementation and enhancement of the CAMCT app.
2) Acquire Intellectual Property Rights (IPR).
3) The use of more 4D multimedia.

REFERENCES
[1] KIM ANN Zimmermann. 2017. What is Culture? https://www.livescience.com/21478-what-is-culture-definition-of-culture.html
[2] LAVANYA Rathman. 2018. Why is Cloud Storage is Good Idea? https://www.cloudwards.net/cloud-storage-good-idea/
[3] ALICIA Andres. 2018. The Cultural Me: An app to help people to learn Arts and Culture. Ahttps://medium.com/@aliciaandres/the-cultural-me-an-app-to-help-people-to-learn-arts-culture-ux-case-study-c73b063f79d
[4] FENG Lim. 2015. CulturalGuru Is the Ultimate App To For Us To Remember Our Culture Roots. https://vulcanpost.com/446131/cultureguru-app-remind-culture-tradition/
[5] Rajasthan. 2018. Reality Premedia Services. https://www.realitypremedia.com/rajasthan-app/
[6] [6] Lucidchart Content Team. 2018. 4 Phases of Rapid Application Development Methodology.
[4] [7] Ian Editor (Ed.). 2018. *The title of book two* (2nd. ed.). University of XXX Press, City, Chapter 100. DOI: http://dx.doi.org/10.1000/0-000-00000-0.

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