Co-creation Tourism Experience in Perceived Usability of Interactive Multimedia Features on Mobile Travel Application

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***Abstract*—The aim of this paper is to explore the use of interactive multimedia features on mobile travel services to improve touristic experiences. This study delivered a workable prototype with visiting Sarawak as a case study by integrating locality/authenticity design and interactive multimedia features content. User-testing was carried out to identify whether the mobile application usability can improve visitor experiences. A total of 40 visitors (18 male and 22 female) were recruited to participate in the user-testing study. The results indicated a positive SUS score 81 out of 100 and that multimedia interactivity on mobile travel application could enrich tourist's co-creation experiences compared to just static navigation and limited interaction. The outcome also significantly enhanced tourism experiences through authenticity design attractions such as iconicity and heritage elements value of a destination region. Overall, the findings provide perception of how tourists perceived usability of interactive mobile travel application and the impact of interface motif. Implications and suggestion are further discussed in this paper.**

***Index Terms*—Authenticity Design; Mobile Application; Multimedia Features; Tourism Experience; Usability.**

I. INTRODUCTION

Early studies by [1] differentiate that traditional reading of travel book or brochure is lack of visualization whereas mobile travel apps provides better interactive contents. However, the interactive contents are limited to certain features such as slideshow, image galleries, embedded audio-video, map, and hyperlink. [2] discovered that there are many mobile applications suffer from usability issues, including information overload, complex screen interface, lack of task support, limited interaction mechanism and static navigation. [3] analyzed the actual usefulness, adoption and success of a mobile information system depends on the usabilities; appropriate design functionalities and interaction features.

[4] identifies that product and company centric innovations are now being taken over by the co-creation experience as a basis for value and as the future of innovation. According to [5], co-creation is defined as a business strategy focusing on customer experience and interactive relationships where it encourages a more active involvement from the customer to create a value rich experience whereas [6] defined that co-creation, is the process where brands and consumers work together to create better innovation ideas, products and services. [7] The co-creation value arises in the form of personalized, unique experiences for the customer (value-in-use) and ongoing revenue, learning and enhance market performance drivers for the firm. Value is co-created with customers if and when a customer is able to personalise their experience using a firm's product-service proposition to a level that is best suited to get their job/task(s) done and which allows the firm to derive greater value from its product-service investment in the form of new knowledge, higher revenues/profitability and/or superior brand value/loyalty.

This research is conducted in the tourism industry context and aims to identify and analyse tourist's co-creation experiences on the implementation of interactive multimedia features on mobile travel application. The component of multimedia features comprises of Augmented Reality (AR), Virtual Reality (VR), 3D/360^{O} model, animation, map, audio, video, slideshow images, pop up image, and scrolling content. System Usability Scale (SUS) investigation were measured to access the co-creation value of the application usage and whether the product-service can go a milestone to market success.

II. LITERATURE REVIEW

A. Locality/authenticity design concept as an approach to increase attractiveness of tourist

In tourism, authenticity is often related to toured objects, tourism sites, and tourist experiences [8]. In such cases, objects are described as authentic when their physical manifestation resembles something that is indexically authentic [9]. Specific products that can attract tourist are considered the "core element" that makes up the attractive-ness of the destination. Tourism product is unique based on the comparative advantages of destination resources where the value of intangible cultural objects and local tourism activities such as art form, folk, ethnic dancing food culture, or other forms of sports activities, traditional festivals, performances, can be materialized by physical products provided to visitors where they stop; or tourism products can also be health care, communications, finance, banking which bring great benefits to tourist. The unique tourism product does not only make up the attractiveness of the destination, but also contributes a main part in its competitiveness. It is stated that besides demand for accommodation, meals, sightseeing, entertainment, demand for travelling is also the basic needs of tourists, a precondition to make the trip which bring up the next demand. In general, a tourist destination is considered attractive if it has three basic elements which is easy to access; specific attractive tourism products; and public service and personal comfort are ensured [10].

Consequently, designing a concept is imperative to promote the aspects of authenticity/locality representations and heritage of a place to draw visitors. By reviewing the design concepts and strategy for creative tourism such as culture, nature, adventure, food, other spatial configurations and considers how these can provide useful elements, is crucial in designing tourism planning.

B. *Functional Multimedia Features*

[11] stated that mobile services have become increasingly essential due to improved access to the internet and the large amount of add-on functional multimedia features available on applications.

The functional features of smart mobile devices are becoming influential. The involvement of information technology in marketing is no longer limited to providing a functional user interface. Using technology, an environment that combines the real world with the virtual world, based on the existing service, and provide a valued and innovative service can be established to enhance interactivity [12].

Based on the survey from [13], the constructed attributes of user acceptance and validity of multimedia features contents such as Augmented Reality (enhances (augments) user's experience and perception of their current reality in a real-world environment), Virtual Reality (replaces real world with a simulated virtual one), 3D model (allow user to rotate an image), GPS map navigation (allow user to navigate a specific destination), audio (audio clip as a media controller to play across pages), video (video controls to allow user to play movie in full screen), slideshow (support both picture files and pages from layouts for user to slide interactively), pop up image (images are larger than the screen size of the device), scrolling text (create a scrollable area within a page so readers can consume the content without having to move between pages) and animation (the process of making the illusion of motion and change) were inspired to enhance travel guide application in a more interactive approach, bridging travel guide to real and lively environment scenario.

C. *Perceived Usability of Mobile Travel Application*

According to [14] usability is describe as a quality attribute that assesses how easy user interfaces are use and is associated with five usability attributes: efficiency, satisfaction, learnability, memorability and errors. Unlike [14]'s model of usability, ISO9241-11 standard outlines only three measurable attributes of usability which comprise of effectiveness, efficiency and satisfaction.

[15] describes that applications should provide the right information in maximum three minutes, otherwise they can be deleted without providing users with value-added information. Besides, mobile devices have the limitation of the reduced screen, causing problems in navigation and in the access to information. [16] analysed the easiness usage of smartphones and their travel applications will drive the future consumers. This is because users today are more secure and confident at planning, researching and booking trips on the move.

[17] Navigation should avoid using web-based concept, where banner act as a button is a misleading and confusion, as majority user would think it is a banner instead of navigation list button. The discovery also highlight that the usability was likely to be enhanced if more interactive multimedia features could be incorporated in the future design and development. Multimedia features such as AR, VR, 3D, GPS navigation, audio, video, and animation would further enhance travel guide app in a more interactive approach, bridging travel guide to real and lively environment scenario.

D. *Mobile Application User Interface (UI)*

[19] highlighted that user interface (UI) is related to user experience (UX) and interaction, and while being easy-to-use is important, an attractiveness yet practical design is essential to the success of an app. However, crafting a super attractive user interface is a challenging job, onerous and time consuming process. According to [19] actual usefulness, adoption and success of a mobile information system depends much on the usability, appropriate design of the available functionalities and the interaction interface. Similarly, [20] also pointed that the most important thing to design a mobile application is to make sure it is both useful and intuitive.

[17] The results of familiarity, simplicity, and straight forward menus design were among some aspects that end user appreciate most for quick and easy-to-use navigation and understanding. Appealing and simple to use, with stunning photos on a good-looking and ideal-real interface to attract tourist.

III. METHODOLOGY

A. *Development of Mobile Travel Application Prototype*

A careful, thoughtful, planned sitemap and evaluated step from research findings [13][17] were acquired. Sitemap or wire framing (Figure 1) plays a crucial role in defining the flow of information contents. The local identity with ethnicity concept was encapsulated and integrated on the main menu of the application. Each of the layout illustrate a series of corporate identity theme for every sitemap of the application. The features of interactive multimedia were chosen and considered base on the suitability and fitness of Sarawak information contents.

A workable prototype with visiting Sarawak, a case study was being implemented based on end-user point of view pertaining the state-of-the-art technologies multimedia features [13] and the comparison study on usability of mobile travel applications [17].

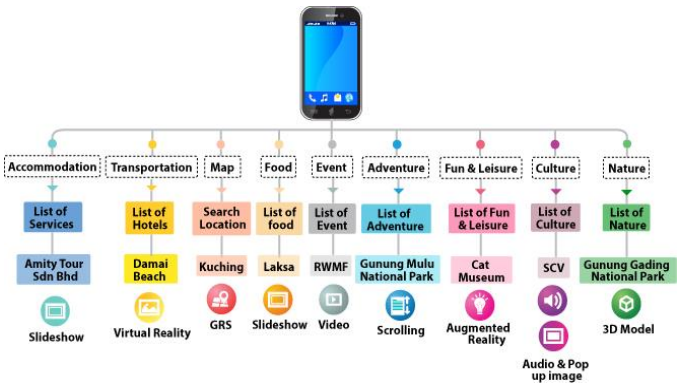

Figure 1: Sitemap of mobile travel prototype application

Figure 2 shows the main menu displays of the characteristic of localities/authenticity interface concepts by cultivating diversification and expansion of its beguiling tribal cultures, jungled highlands, national parks, longhouse, traditional lifestyle and present way of life.

The main menu layout emphasizes a colour scheme combinations inspired by nature, food & drink, travel and authenticity motive design element. A typical natural woody brown was preferred as a background choice of colour to represent the look and feel of Sarawak locality/authenticity forestry. Assimilate with colour palette, the background is brighten up with a splash of green qualities featuring jungle highland and national park.

The visual interpretation used local native objects/items as navigation button such as *sape*, *pua kumbu*, *laksa*, and *sampan*. It is designed to be visibled and straight forward for easier understanding of sitemap navigation. Each of the real-image element depict the menu button/direction link, e.g. *laksa* image (Fig. 2) is a clickable link to 'food' information with animated coffee aroma (Fig. 2) to create the sensation aromatic setting; the *sape* instrument (Fig. 2) is a button link to 'event' content with soft background traditional *sape* musical as background melody composition to create the overall look and feel of the authenticity theme. Likewise each of the icon button is a representative of every information navigation.

Figure 2: Proposed authenticity visual concept of the main menu

Figure 3(a)

Figure 3(b)

Figure 3(c)

Figure 3(d)

Figure 3(e)

Figure 3(f)

Figure 3(g)

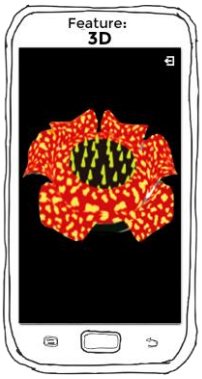

Figure 3(h)

Figure 3(i)

Figure 3(a-i). Component of multi-rich interactive multimedia features

B. Prototype Evaluation

This study used a mobile smartphone Samsung Note5 with 5.7" Quad HD display. Participants interacted with the prototype application according to instruction given as a guideline. The interview for each participant took roughly about 10 minutes to complete individual session.

Within ISO 9241-11, usability is defined as 'The extent to which a product can be used by specified goals with effectiveness, efficiency, and satisfaction in a specified context of use'. Here, participants evaluated the mobile application prototype through the System Usability Scale (SUS) questionnaire (Brooke 1996). It comprises ten questions (on a 5-point Likert Scale) and calculates a value between 0 and 100 (100 = perfect usability) [15]. The mean SUS scores, standard deviations, and confidence intervals (α=5%) were measured for the mobile application prototype.

The interview questionnaire were designed based on System Usability Scale (SUS) questionnaires; validity of interactive multimedia features; and the attractiveness of the prototype interface design.

Section A collects on the demographic profile of respondents which includes age, gender, nationality, designation/profession, choice of preference to download travel app before a destination, the frequency of travelling in a year, and whether participants have been to Sarawak.

Section B contains 10 standard questionnaires template of System Usability Scale (SUS) with half positive and half negative close-ended worded statements on a 5-point Likert scale questions from 'strongly agree' to 'strongly disagree'.

Meanwhile, for Section C, respondents were questioned on the attractiveness of the tangible prototype interface design.

Lastly, users were interviewed to give personal view-points experience, and suggestion on what and how to improve the overall mobile travel guide application.

C. Subjects

Since tourists are the main stakeholders, the population survey was taken from a range of domestic and international tourists who visited the capital. Respondents were invited to participate in the 10 minutes survey. Although it was attempted to set an equal gender proportion, 55% of participants were female, and only 45% male, most of them being students, and educators making frequent short trips during the year as well as young professionals visiting annually trips to Sarawak Rainforest Music Festival 2016. 30% of the sample were tourists between the age of 20 and 29, while 40% were 30 and 39 and 25% between 40 and 49 as well as 5% were 50 and above. They were classified as domestic (65%) and international (35%) tourist industry discussion groups which fall under non-professional (employee) and professional (students, educators, musicians, dancers/performers, and singers). The respondents were approached at Kuching International Airport (KIA), Kuala Lumpur International Airport (KLIA), and universities to participate in this fieldwork survey.

Survey showed that majority of the participants (40%) stated that they travel twice in year 2015/2016. Majority (85%) do prefer to download mobile travel applications to seek information.

Next, the custom-designed question compelled participants to rate the mobile travel apps user interface design. Here, participants justified their response in a close-ended Likert-scale questionnaire. Respondents were also requested to give comments on the tangible travel application overall system, the obsessions they favour or dislike and future upgrading/expansion research.

D. Data Analysis

Data were analysed using the method of mean of SUS scores/related adjective. This method is performed through Statistical Package for Social Science (SPSS) or Microsoft Excel. Once the SUS scores were calculated based on SUS's formula, the sum of values were then generated with mean SUS scores of 81 (round figure) out of 100. The 100 is not a percentage, but a clear way of seeing score.

Based on the guide to SUS score interpretation [18], an overview of how a scores should be measured:

- 80.3 or higher is an A. People love the site and will recommend it to their friends
- 68 or thereabouts gets a C. You're doing OK but could improve
- 51 or under gets a big fat F. Make usability your priority now and fix this fast.

Similarly, mean of SUS scores/related adjective can also be clarified as below:

92 = best imaginable
85 = excellent
72 = good
52 = Ok/fair
38 = poor
25 = worst imaginable

IV. Research Findings

The prototype development attained significantly good score of 81 in the usability measurement, matching the quality attribute and reflecting the reliability of multimedia features from end-user point of view.

A. Effectiveness

Effectiveness refers to the success of achieving user's objectives on how well the system is done. As part of the SUS questions is aimed to focus on effectiveness, participants were required to rate on a 5-Likert scale on whether the system is unnecessarily complex and how easy they were able to navigate the system menu prototype. Descriptive statistics disclosed a score of 72.5% 'strongly agree' and 'agree' that the system is unnecessarily complex. Conversely, a perfect score of 100% revealed 'strongly agree' and 'agree' that the menu direction was 'easy' to navigate. The main menu effectiveness was listed as easy to understand and navigate. Participants attributed ease-of-use to the clarity of straight forward menu navigation and attractive layout design of the prototype application. Hence, the summation of the score signified that the menu navigation was considered as effective prototype development system. The responses to the SUS questions (effectiveness) set are summarised in the Table 1 and 2.

Table 1
Q.2 I found the system unnecessarily complex

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	4	10.0	10.0	10.0
Disagree	4	10.0	10.0	20.0
Neutral	3	7.5	7.5	27.5
Agree	19	47.5	47.5	75.0
Strongly agree	10	25.0	25.0	100.0
Total	40	100.0	100.0	

Table 2
Q.3 I thought the system menu navigation was easy to use

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	-	-	-	-
Disagree	-	-	-	-
Neutral	-	-	-	-
Agree	17	42.5	42.5	42.5
Strongly agree	23	57.5	57.5	100.0
Total	40	100.0	100.0	

B. Efficiency

Efficiency is related to the speed and accuracy. This attribute reflects to the productivity of a user while using the application. Both results showed that the pattern of responses varied significantly across the prototype system with 92.5% 'strongly agree' and 'agree' attribute. The efficiency of SUS questions (Q.5 and Q.7) are presented in the following tables.

Table 3
Q.5 I found the various functions in this system were well integrated and efficient to select

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	2	5.0	5.0	5.0
Disagree	-	-	-	-
Neutral	1	2.5	2.5	7.5
Agree	18	45.0	45.0	52.5
Strongly agree	19	47.5	47.5	100.0
Total	40	100.0	100.0	

Table 4
Q.7 I would imagine that most people would learn to use this system very quickly

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	1	2.5	2.5	5.0
Neutral	1	2.5	2.5	7.5
Agree	13	32.5	32.5	40.0
Strongly agree	24	60.0	60.0	100.0
Total	40	100.0	100.0	

C. Satisfaction

An application must be satisfying to use in order to be usable. Consequently, users must like the UI look and feel, and that it should serves for a purpose. For this, participants were questioned whether they were satisfied with the travel guide application; how likely they will use the system frequently and how confident they felt using the system. The analysis of descriptive statistics frequencies showed 95% agreeable; while the confident level showed 97.5%. Subsequently, the satisfaction issues reflected the effectiveness and efficiency of the overall prototype. The Tables 5 and 6 reviewed the satisfaction of SUS questionnaires.

Table 5
Q.1 I think that I would like to use this system frequently

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	1	2.5	2.5	5.0
Agree	18	45.0	45.0	50.0
Strongly agree	20	50.0	50.0	100.0
Total	40	100.0	100.0	

Table 6
Q.9 I felt very confident using the system

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	-	-	-	-
Disagree	-	-	-	-
Neutral	1	2.5	2.5	2.5
Agree	15	37.5	37.5	40.0
Strongly agree	24	60.0	60.0	100.0
Total	40	100.0	100.0	

As for Section C, Table 7 to 14 were reviewed based on frequency, percent, valid and cumulative percent from Interface Design questionnaires:

Table 7
Q.1 The main menu of the interface looks straight forward to understand

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	-	-	-	-
Agree	18	45.0	45.0	47.5
Strongly agree	21	52.5	52.5	100.0
Total	40	100.0	100.0	

Table 8
Q.2 The visual design is unnecessarily complex

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	2	5.0	5.0	5.0
Disagree	3	7.5	7.5	12.5
Neutral	2	5.0	5.0	17.5
Agree	16	40.0	40.0	57.5
Strongly agree	17	42.5	42.5	100.0
Total	40	100.0	100.0	

Table 9
Q.3 The visual are matching with the desire concept (look and feel)

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	-	-	-	-
Disagree	-	-	-	-
Neutral	2	5.0	5.0	5.0
Agree	14	35.0	35.0	40.0
Strongly agree	24	60.0	60.0	100.0
Total	40	100.0	100.0	

Table 10
Q.4 The graphic icon features are easy to recognize

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	-	-	-	-
Disagree	-	-	-	-
Neutral	-	-	-	-
Agree	16	40.0	40.0	40.0
Strongly agree	24	60.0	60.0	100.0
Total	40	100.0	100.0	

Table 11
Q.5 The interface is attractive and creative

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	1	2.5	2.5	5.0
Agree	10	25.0	25.0	30.0
Strongly agree	28	70.0	70.0	100.0
Total	40	100.0	100.0	

Table 12
Q.6 The layout design is consistent throughout the application

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	1	2.5	2.5	5.0
Agree	17	42.5	42.5	47.2
Strongly agree	21	52.5	52.5	100.0
Total	40	100.0	100.0	

Table 13
Q.7 I think I like the overall interface of the application

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	2	5.0	5.0	7.5
Agree	13	32.5	32.5	40.0
Strongly agree	24	60.0	60.0	100.0
Total	40	100.0	100.0	

Table 14
Q.8 The interface does influence me, to want to visit and know more about the place

Response	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	1	2.5	2.5	2.5
Disagree	-	-	-	-
Neutral	1	2.5	2.5	5.0
Agree	11	27.5	27.5	32.5
Strongly agree	27	67.5	67.5	100.0
Total	40	100.0	100.0	

Some additional comments/reviews from open-ended interview questions are shown as below:

I have been using TripAdvisor but have never come across Augmented Reality feature let alone Virtual reality? Is AR technology similar to hologram or Microsoft HoLoLens? Technology is unpredictable, I think other travel apps would have those features coming along soon?

My view is that I can feel the cell phone start to get warm/ generate heat/ piping hot after sometime of using the app. Is the features consume energy? The ability to regularly update travel information is an advantage of travel app compared to once a printed version is published. So yes for me. I'll definitely use travel app as a guide to travel.

It would be good to have language translator and currency convertor to be included as well in the app. Overall, nice functionality, user friendly and helpful! I can even use the app even though its offline accept for GPS right.

My cell phone older generation cannot seem to download the app. App crashes immediately after starting. The VR is cool I can view actual scene of my hotel before booking. The app looks simplistic and I like the authentically designed with interactive information.

Do we have to buy the app? Travel app is portable but can be annoying to read if our cell phone screen is small for older people like me. A printed guide fits in my handbag and is user friendly all the time. But the fact I can have more information in the same device is a plus.

I personally think the animation of coffee aroma looks real to me. Any possible Augmented Reality technology can transform to real coffee? What about having AR shopping and museum. The 3D model of rafflesia which can be rotated help my kids to appreciate the nature of flora environment and attract us to want to visit Gunung Gading National Park.

I expect this app able to give me helpful information about the region I want to visit, particularly the VR benefits me to visualize the real scene of a particular site. The AR video and interactive 3D access is extraordinary. Cat Museum which augment the 3D cat model with information entice and fascinate my children. Fantastic app!

The app is ok just that it will restart itself. Still some glitches that need to be improved but overall it's a good interactive app with AR, VR, 3D, and video features. I am a food lover. Perhaps can have food features to suggest tourist where to eat, know the trend of food menu within grasp at the most recommended restaurants, the closest or choose from the categories of restaurants e.g. Asian fusion, Western, Japanese, Halal, Drinks & Desserts and more to satisfy tourist craving whatever they are?

V. DISCUSSION

The aim of this study was to present an initial step towards understanding the impact of a responsive interactive mobile tourism application on perceived usability, and the overall attractiveness of the prototype development concept. The configuration results reflected the usability score of 81 for the prototype was considered significantly 'good' acceptation. Hence, the prototype was regarded as effective, efficient and satisfaction travel guide application based on the ease-of-use, speed, and overall satisfaction.

This can be accredited mainly to its familiarity and simplicity display with locality/authenticity aesthetic concept design. The layout which confined to ethnicity graphic-related usage as main menu navigation, a possible explanation to consider its user-friendly while keeping the application fast to load information. The overall UI interface design was rated as attractive and satisfied to use.

Essentially, the sitemap navigation which integrate interactive digital media contents workflow in Android platform assist user to interact on contents and better understand of a particular site information.

The value of tangible and intangible cultural objects and local tourism activities such as art form, motive, folk, ethnic dance, food culture, and other forms of sports activities, traditional festivals, performances, are crucial to appeared as authenticity/locality concept design.

Conversely, user experiences defined that multimedia features such as Augmented Reality, Virtual Reality and 3D model were recognized as useful and convenient to augment the visual understanding of a specific place and information, the two-ways interactions is just clickable to enrich and engage traveller to a particular site, bridging travel guide to real environment scenario e.g, at Cat Museum, Augmented Reality video and interactive 3D which augment 3D cat model with information to interact can easily fascinate children to visit; hotel with Virtual Reality feature are able to give a glimpse of the actual place throughout the panoramic 360^0 view; while 3D model of *rafflesia* which can be rotated help visitor to appreciate the nature of flora environment and attraction to visit National Park.

The ability to regularly update travel information is an advantage of travel application compared to travel book printed and published version. Mobile travel application is convenience, portable, and informative even though it is on offline mode.

The limitation of this study disclosed the challenge to optimize the application to the compatibility of a device's requirements. Besides, the general characteristics of mobile devices (e.g. screen size) and their implications on user experience are strictly adhere to the basic standards to support as many devices as possible. Mobile communication usability can be achieved by emphasizing the importance of fast and reliable access to content, as well as the quality-particularly conciseness, accuracy and coverage-of the relevant information. Hence, providing minimal content in an effective way on the smallest portable device is imperative to promote relevant information in the timeframe with scrolling

text. Since content expansion significantly increases the size of the application, an alternative solution would need to be found, as tourists were deterred to download an application with a large size, and further would refer to other sources if the application turns out to be slow to react or app getting warm after a certain time of using.

The recommendations for future research is to enable tourism organisations to understand how and where technology-enhanced needs to be implemented before, during and after the tourists arrive at a destination. Additional add-on features of interactive such as AR museum and shopping opportunities would garner more virtual information and personal hobbies. Similarly, suggestion of integrating currency calculation and language translator features are among some other favourable information to be considered in the next travel application enhancement.

VI. CONCLUSION

The increasingly growing mobile app tourism needs to be addressed with greatest care. Ultimately, users will decide on the success or failure of such implementations. This paper presented the user's experience of travel guide application prototype with the determined multimedia features.

The UX of travel guide apps design has assist in the development of app system to reduce undesirable impressions from user. As users favour application with a focus on aesthetics and design interface, this study also reveals that the ease of use is the key factor for the success of an application. Speed in finding information plays a significant influence in tourist application.

It is generally felt that the survey performed with a group of forty tourists show that the objectives were attained, having achieved a score of 81 in the SUS scale, stirred a chance Of demand success. While user feedback has been positive and the figures are encouraging, it is proven that interactive multimedia travel guide application will be commonly adopted, especially the multimedia features of AR, VR and 3D aside from other multimedia components.

The outcome of this study indicates that more interactive multimedia features content can have positive consequences for the user experience, which impacts user of touristic mobile app. Overall the digital media would progressively adhere attention in mobile tourism application industry and assure long-term growth. Hence, the prediction by [18] that the future of mobile app will include more interactive formats such as hyperlinks and multimedia, is proven and validated in this study. The interactivities are potential to offer added value to transform and engage travel experience.

Conversely, the outcome of the multimedia features implementation in this study can also be directly contributing to various industry fields such as education (interactive eBook, museum guide), architecture (interior design), and entertainment (game, advertising).

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