

Usability Study on Interesting Place Recommendation System

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Abstract: The recommender system (RS) is one of the important applications that can help the user plan and make decisions. In the tourist sector, RS can be employed to suggest intriguing locations so that users know what to expect from their travels. This article suggests a useful approach for recommending locations to tourists. The suggested system is an online application that offers users a list of suggested locations based on their past experiences. More precisely, this RS will compare the user's information to other visitors' travel patterns and generate travel destination suggestions. Thirty-one respondents were asked to use and test the application as part of the usability testing after it had been built. The results demonstrate how well the proposed application works to help users discover the information they require. Additionally, the respondents noted how much simpler it is for them to plan their vacation with the help of the system.

Keywords: *Tourism, interesting place, recommender system, usability study*

1. Introduction

The majority of tourists encounter difficulties as a result of a lack of knowledge about the places they want to visit. Because they are unfamiliar with some locations, making decisions and managing the budget will be challenging. Most tourists discover that planning their holidays takes time since they have to look for and assemble helpful information from a variety of online resources, such as blog sites, agency webpages, and travelogues, as well as other sources [1].

Information and communication technology (ICT) has been proven to be helpful in assisting with travel planning [2]. However, information published on digital platforms, especially websites, is merely informative and does not aid or support decision-making. Some travel websites exclusively offer trip packages to make money off of travelers. Some websites also offer scant information and are

unable to suggest interesting places to visit depending on the visitor's background and interests. As a result, tourists are overloaded with information that is difficult for them to process.

This study proposed a recommendation system to help tourists plan their trip and identify places of interest for them to visit. This approach can reduce the cost of tourist search [3]. The suggestions are founded on the traveler's prior experiences as well as feedback from other tourists.

A recommender system is an application that makes recommendations to users [4]. These devices will inform visitors and provide them with advice on which attractions are best for them. The collaborative filtering approach is most frequently used on travel websites with recommendation algorithms. The collaborative filtering technique not only predicts what a user might like based on

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previous user similarities, but also collects and analyses a significant quantity of data about a user's preferences and past activity [5].

One example of a system for recommending tourism destinations is proposed by Smirnov et al [6]. Smirnov et al proposed a system that offers recommendations based on travellers' preferences and contextual information about the location. Based on reviews from other travelers, the system chooses information from the Internet and offers descriptions of significant attractions locations [6].

In our previous article [7] we have presented the proposed design of the system. In this article we focus on the usability study on the system.

2. Materials and Methods

In this study, an "Interesting Place Recommender System for Tourists" called "M-Tourism" has been developed. In accordance with the users' gender, age, and race, M'Tourism aims to recommend to them fascinating locations. Using views and suggestions from other tourists, the system can help tourists make a judgement. The interface of M'Tourism is straightforward in design, making it usable by the majority of users (Figure 1).



Figure. 1. Main Page of M' Tourism

All of Malaysia's notable tourist spots are covered by M'Tourism. The locations were grouped into nine categories: islands, theme parks, beaches, famous places, caverns, shops, temples, and natural parks.

The M'Tourism was put through a usability study to see if it was usable. A total of 31 respondents, including UUM students, friends, and members of the general public who are interested in travel, have been invited to participate in the study.

The step of evaluation:

- first, user must select "I accept" on the questionnaire's first page's consent form,
- second, the user must go to M'Tourism website, browse the website and use the functions,

- finally, the respondents can express their satisfaction by answering the given questionnaire.

3. Findings

Based on the background information provided by the respondents, 87 percent of the respondents (27/31) were female, and 13 percent of the respondents (4/31) were male (Figure 2). Nearly two-thirds of the respondents were between the ages of 19 and 39. (Figure 3).

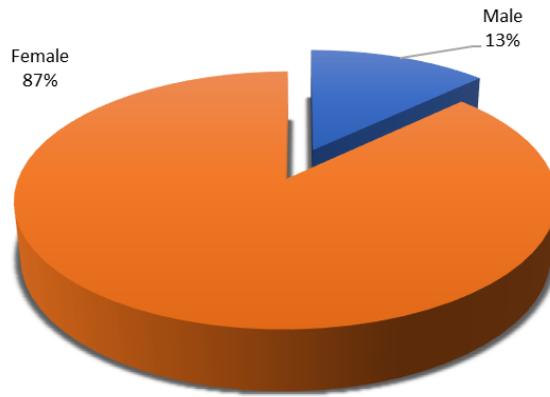


Figure. 2. Gender

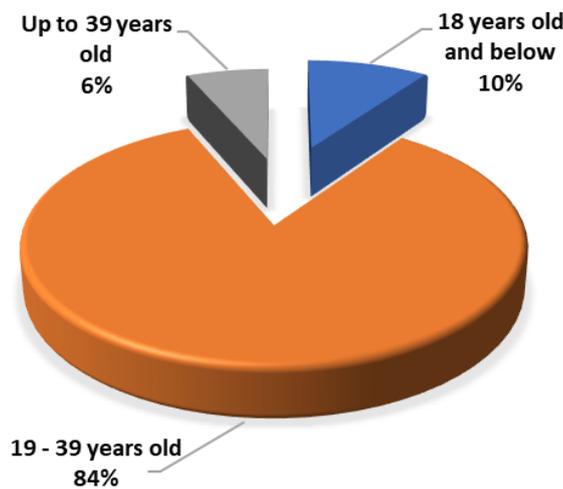


Figure. 3. Respondents Age

Additionally, the results demonstrate that 55% (17/31) of the respondents had prior experience using travel websites, as opposed to 45% (14/31) who had no prior experience (Figure 4).

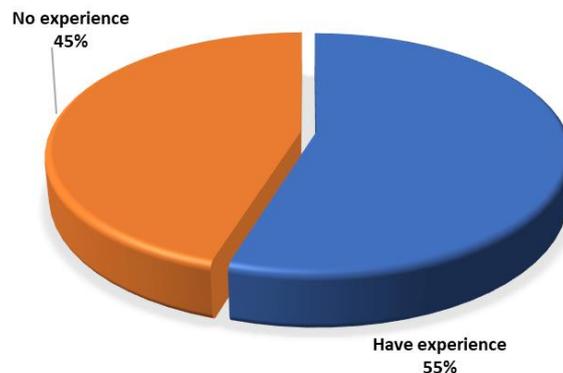


Figure. 4. Experience using travel website

The respondents' satisfaction with the M'Tourism website was based on performance expectancy, effort expectancy, social influence, facilitating conditions, behavioural intention, website design, and content of the website. The

responses in Tables 5–10 represented the frequency and percentage of the respondents' responses.

Overall, every respondent had a favourable opinion of the system. The usability evaluation's findings indicated that the M' Tourism website is helpful and simple to use. All

respondents concurred that the website makes it simple, quick, and straightforward to find what they need. Additionally, respondents firmly agreed that using the website can save them time and that the interaction with the website is easy and clear. Additionally, every respondent agreed that the website may be a useful tool for arranging trips and finding out about fascinating locations.

The respondents believed that using M' Tourism would help them organize their upcoming journey more successfully and help them get the information they were looking for. Additionally, the respondents resoundingly agreed that the website design can render well in browsers

and that the website interface is attractive, while the content supplied for the respondents is significant, clear, and enables users to access the appropriate stuff without difficulty.

Based on the analysis of the respondents' comments regarding all the services offered by M' Tourism, the majority of respondents concur that M' Tourism is user-friendly, can assist in locating palaces, and can support them in making decisions. Finally, because they enjoyed how the application looked, the respondents intended to recommend this website to others.

Table 1. The performance expectancy

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Using this website, I can do the searching quickly.	0	0	2 (6%)	10 (33%)	19 (61%)
As a tourist, M'Tourism is useful.	0	0	2 (6%)	13 (42%)	16 (52%)
M'Tourism can enhance my productivity,	0	0	1 (3%)	14 (45%)	16 (52%)
M'Tourism is simple to use.	0	1 (3%)	1 (3%)	9 (29%)	20 (65%)
M'Tourism allowed me to find the information I needed easily.	0	0	2 (6%)	13 (42%)	16 (52%)

Table 2. The effort expectancy

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
On the M'Tourism, I have no trouble finding what I'm searching for.	0	0	2 (6%)	12 (39%)	17 (55%)
I quickly develop my skills when utilizing the M'Tourism.	0	1 (3%)	3 (9%)	10 (33%)	17 (55%)
M'Tourism helps me find what I'm searching for faster.	0	1 (3%)	1 (3%)	12 (39%)	17 (55%)
The interaction in M'Tourism is straightforward and understandable.	0	0	2 (6%)	9 (29%)	20 (65%)

Table 3. The social influence

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I believe that M'Tourism can provide the useful information to me.	0	0	3 (10%)	12 (38%)	16 (52%)
I believe that I can plan my travel with more effective.	0	1 (3%)	2 (6%)	10 (33%)	18 (58%)
I believe that M'Tourism can save my time in searching the needed information.	0	1 (3%)	3 (10%)	11 (35%)	16 (52%)
I believe that M'Tourism can help me to obtain interesting information.	0	0	3 (10%)	9 (29%)	19 (61%)

Table 4. The facilitating conditions and behavioral intention

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have a good Internet connection to visit M'Tourism.	0	2 (6%)	0	14 (45%)	15 (49%)
M'Tourism is compatible with other tourism websites.	0	1 (3%)	5 (16%)	13 (42%)	12 (39%)
I intend to continue using M'Tourism in my future travel.	0	0	2 (6%)	11 (36%)	18 (58%)
I will always try to use M'Tourism in my future travel.	0	1 (3%)	2 (6%)	12 (39%)	16 (52%)

Table 5. Design

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Do you like the design of the M'Tourism?	0	0	4 (13%)	12 (39%)	15 (48%)
Do you think the colors of the M'Tourism is appropriate?	0	0	7 (23%)	7 (23%)	17 (54%)
Do you think the size of the pictures on the website is appropriate?	0	0	6 (19%)	12 (39%)	13 (42%)
Does the design of M'Tourism render well in a browser?	0	1 (3%)	5 (16%)	6 (19%)	19 (62%)
Do you think the M'Tourism interface is pleasing?	0	1 (3%)	5 (16%)	9 (29%)	16 (52%)

Table 6. Content

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The information provided by M'Tourism is clear.	0	0	0	15 (48%)	16 (52%)
The information provided by M'Tourism can effectively help me as a tourist.	0	0	1 (3%)	12 (39%)	18 (58%)
The content provided by M'Tourism is meaningful.	0	0	1 (3%)	10 (32%)	20 (65%)
Do you find the relevant content on M'Tourism?	0	0	0	15 (48%)	16 (52%)
Was the information on M'Tourism helpful to you?	0	0	1 (3%)	12 (39%)	18 (58%)

3. Conclusion

M'Tourism can be one of the enticing and beneficial web application for tourist. This is because careful planning will enable tourists to spend more time and money on family-friendly activities. Users of M'Tourism may easily find out information about travel locations. Additionally, a recommendation based on the user's history will be given.

Additionally, visitors can read details about Malaysia's most fascinating locations across each state. This website can be freely accessed from anywhere with an Internet connection. M'Tourism also stimulates interest in travel because website visitors may be drawn in by the appealing images and descriptions while exploring the site.

In order to improve the recommender system for the users, the system can be further improved by determining and incorporating more user attributes as well as by providing more information about the area. Additionally, a hybrid

technique [8] can be used to further improve the recommender system by improving the algorithm's performance. The system can also be migrated to a mobile platform to improve user accessibility [9].

It is believed that M' Tourism can encourage and boost Malaysians' enthusiasm in travelling, particularly to nearby locations. As a result, the local economy will become more enriched. Attracted users will travel to interesting locations, spend money there, and boost local businesses' profits.

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