The Effect of Malaysian Customer Characteristics on Intention to Adopt Edutainment Services in Digital Home

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ABSTRACT: *This study aims to diagnose the significant differences between the Malaysian demographic characteristics and intention to adopt edutainment services in digital home. Questionnaires have been distributed to 339 respondents who reside in Malacca, Kuala Lumpur and Selangor. The results of the study revealed that there is a significant difference between gender and intention to adopt edutainment services in digital home. It is further suggested that gender should be given some consideration in future research efforts. The research and practical implications of these results are discussed and opportunities for future research are provided.*

1. Introduction

The convergence of education and entertainment, or the so-called edutainment [1] can be defined as a hybrid concept that relied heavily on visual material, narrative and game-like format. The birth of edutainment technologies in the market is believed to aid students in their learning process. In the past, edutainment applications have been used for the development of educational games [2]. However, nowadays, edutainment is no longer limited to educational computer game only. In sum, it is a blend of a content in a form of education and entertainment that uses a variety of media platforms including computer games [2] [3] [4].

With the presence of edutainment technology, it is possible for students nowadays to learn anything anywhere, without any boundaries. In fact, the existence of this educational technologies have even inculcated students to learn in a fun, interactive, exciting environment [5] and at the same time help prepare the general population as the country shifts towards a knowledge based economy. In line with that, this paper aims to study the effect of customer characteristics (gender, education level, occupation and age) on intention to adopt edutainment services in digital home.

2. Literature Review

2.1 Customer Characteristics and Edutainment Services
The existence of edutainment is believed to enhance the teaching and learning environment [3]. Edutainment can make education become easier and fun for students [6]. The study of [7] shows a significant relationship between gender and edutainment. This is in line with the study of [8].

Also, looking at the relationship between age and education on edutainment, the study of [9] shows a significant relationship between age, education and electronic media used for edutainment (television and radio). However, the study of [10] has found insignificant relationship between age, gender, occupation and education with edutainment.

Based on the findings of previous studies above, the following hypotheses are developed:

*H*1: There is a significant difference between gender and intention to adopt edutainment services in digital home.
*H*2: There is a significant difference between education level and intention to adopt edutainment services in digital home.
*H*3: There is a significant difference between occupation and intention to adopt edutainment services in digital home.
*H*4: There is a significant difference between age and intention to adopt edutainment services in digital home.

3. Reasearch Methodology

339 questionnaires have been distributed to respondent who resides in Malacca, Kuala Lumpur and Selangor. Before the respondents fill in the questionnaire, the researchers explained about the edutainment (by showing the accompanied materials i.e. slides, booklet and bunting that comprised edutainment services). After the respondents listened to the explanation and viewed the materials provided, a set of questionnaire will be given to them, to be filled in. Upon returning the questionnaires, respondents were given gifts of appreciation.

Items in questionnaires are self-developed. All items are measured using multi-item Likert scale, with 1 being "*Strongly Agree*" and 5 being "*Strongly Disagree*".

4. Findings

4.1 Scale Validation
SPSS version 16.0 was used to analyze the collected data. The factor analysis utilized the principal component extraction method and Varimax rotation. The result of the factor analysis showed a single factor solution with eigenvalues greater than 1.0 and the total variance explained was 62.07 percent of the total variance. KMO measure of sampling adequacy was 0.880 indicating sufficient intercorrelations, while the Bartlett's Test of Sphericity was significant (*Chi square* = 17555.003, $p < 0.01$). Component 1 is then classified as edutainment adoption intention.

The rule of thumb outlined by [11] indicates that the well-validated scales should have Cronbach alpha coefficient value of 0.7 and above, while [12] indicates that Cronbach alpha coefficient of 0.6 is reliable for exploratory analysis. The reliability analysis conducted for the independent variable in this study shows reliable results for edutainment adoption intention (*Cronbach alpha coefficient* = 0.912).

4.2 Demographic Profile of the Respondents
A total of 339 questionnaires distributed and collected from residents of Malacca, Kuala Lumpur and Selangor. 26 percent were aged 25 and below, 14.5 percent aged between 26 to 29, 22.4 percent were aged between 30 to 31, 18.3 percent were aged between 32 to 36 and the remaining 18.9 percent aged 37 and above. With regard to the respondent's gender, the majority were female i.e. 53.1 percent, while the remaining 46.9 percent were male. In sum, the distribution was almost equal in terms of the respondent's age and gender. In terms of ethnicity/race, more than half of the total sample, or 85.3 percent, were Malay, followed by Chinese (10.3 percent), Indian (3.5 percent) and 0.9 percent of the respondents belonged to other ethnicity/race.

In terms of occupation, majority of the respondents (31.6%) were professional in private sector, followed by 21.2% respondents were professionals working in public sector, and 19.8% were executives in public sector. The remaining 8% were executives in public sector, 5% were clerical worker in public sector, 2.1% were clerical worker in private sector, 5.9% were self-employed, 0.6% were unemployed and 0.6% were housewives. 5.3 percent of the respondents belong to other types of occupation.

With regard to education level, majority of the respondents (39.5%) obtained bachelor's degree, followed by 32.4% of the respondents obtained diploma and 17.7% of the respondents obtained master's degree or higher. The remaining 0.3% of the respondents obtained SPM/SPMV/STPM and 2.1% of the respondent obtained certificate.

4.3 Hypotheses Testing

An independent sample T-Test was conducted to compare the intention to adopt edutainment services in digital home scores for the male and female respondents. There was a significant differences in the scores for male ($M = 1.6289, SD = 0.54675$), and female respondents [$M = 1.7812, SD = 0.63503; t(337) = -2.351, p = 0.019$). Thus, hypothesis $H1$ is accepted supporting the study of [7] [13]. The study of [14] also found differences in interaction style across gender for edutainment. Noting that when it comes to technology, male customers are more advance and easily accepting new technologies as compared to their counterparts, thus, the significant result across gender is of no surprise to researcher [15]. Also, it was found that there was no statistically significant differences for education level [$F(5, 333) = 1.771, p = 0.118$], occupational level [$F(9, 329) = 1.8555, p = 0.058$] and age [$F(4, 334) = 2.159, p = 0.073$]. Thus, hypotheses $H2$, $H3$ and $H4$ are rejected. The rejection of the hypotheses contradicts with the study of [9] [16].

Noting that the adoption of edutainment is still in its infancy stage, and that these respondents are working people that have not being exposed to edutainment during their education days, thus the respondents are still facing lacking of knowledge and information relating to education services and digital home itself. This resulted to their indifferent attitude towards intention to adopt education services in digital home. Further study should be conducted to verify this proposition.

5. Conclusion

This study has attempted to provide an insight into the needs of profiling consumer market based on their intention to adopt edutainment services of digital home. The development of four hypotheses for this article was meant to identify the suitable customer characteristics for digital home.

The results revealed that there was an only significant difference between gender and intention to adopt edutainment services in digital home, while the remaining three hypotheses i.e. gender, age and occupational level were found to have no significance to intention to adopt edutainment services in digital home.

In relation to that, three limitations have been identified in this study namely specific services and limited sample size. The use of a specific service (i.e. edutainment services) limits the outcome of this study to other industries. However, its use is believed to provide a different approach in understanding the Malaysian customers' intention to adopt edutainment services. Besides, it is hoped to seek for a new avenue in the education services in developing countries such as Malaysia.

Finally, the sample size used was limited to 339 respondents only. Thus, the results of this study cannot be generalized as planned. Future research is encouraged to extend this study to a bigger sample size to obtain more generalized outcomes.

6 . Implication for Pracctitioners

This study will provide benefits to practitioners as they may use the findings to gain better insights in designing edutainment software that suits the different gender of the customers. For example, edutainment games designed for female should look into elements of either puzzle, adventure or managerial games so as to attract more female to learn in a fun way of edutainment. On the other hand, education for boys should inculcate the entertainment that comprises sports, strategy or role playing game. This is in line with the findings of [17].

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