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## VISITORS' USE OF INFORMATION KIOSK AT MELAKA TOWN HERITAGE SITES

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### Abstract

*The advancement in information and communication technology (ICT) has garnered much interest in various fields. Tourism arena is one of the many fields in which ICT has become a subject of interest. Although in the late 90's and in the early 21<sup>st</sup> century virtual tourism was predicted to have a major impact, traditional visit to places of attraction still remains popular. Therefore, the visitor's appreciation and knowledge on certain places of attraction may improve through an integration of virtual tourism into a conventional physical movement. This will later could help induce further interest to visit. This integration can take in many forms. One of the many significant approaches to this method is to deploy an ICT based information kiosk. Adapting the intrinsic value of information through the information kiosk however, requires more than just the technology. Social norms and user behaviour has to be adequately studied in order to better understand the visitors intention and likelihood to use such technology. Perhaps, the deployment of such technology is viewed as a catalyst to lure interest among visitors to heritage sites. Therefore, understanding the social behaviour among visitors would contribute useful information on the technical aspects of the kiosk such as design, concept and content. Several theories of social behaviour are studied and the most applicable theory is used to explain the intention and the actual use of the kiosk. Derived from the Theory of Reasoned Action which is later refined into Theory of Planned Behaviour, a model called Unified Theory of Acceptance and Use of Technology (UTAUT) is adapted in this study. The use of UTAUT is considered appropriate in current study as it incorporates several parameters that help to explain the use of an ICT based information kiosk among visitors.*

*Keywords: kiosks, behavioural theory, interpretive media, UTAUT model*

### Introduction

Melaka is indeed rich in its fabulous history. To date, historical remains of colonization by three foreign powers i.e. Portuguese, Dutch and British between 16<sup>th</sup> and 20<sup>th</sup> century in the form of monuments are found in the city depicting the European, Chinese, Indian and Islamic architectural forms. These historical built environments in all provide rich cultural heritage experiences that entice visitors to this city. In lieu of the rich historical value found in the city, Melaka was declared a 'historical city' on 15<sup>th</sup> April 1989 and on 7<sup>th</sup> July 2008 as UNESCO World Heritage Site. Local and foreign visitors come here to visit its historical sites and experience its exotic collection of diverse cultures. For some, a tour along the streets of Melaka is an educational experience in itself that unfold its story of past glory, drama and conquests (Chye & Wee, 1998).



To diversify Melaka's tourism products and to attract more visitors, Melaka State Government offers 12 categories of systematic promotional campaign in order to turn Melaka into a premier visitor destination, using themes or slogans such as history, culture, recreation, sport, shopping, convention, health tourism, education tourism, agro-tourism, eating out, "Melaka my second home" and Youth tourism. Thus, Melaka government places a great emphasis in promoting historical and cultural tourism as a way to develop a place-specific identity, which will finally turn the state into a heritage tourist centre in Malaysia.

Tourism is an indispensable element of the Melaka economy, which must be harnessed as an engine of socio-economic growth and cultural affirmation to generate investment, foreign exchange and employment. Credit should be given to Melaka State Government and other legislators who authored the bill for their vision of pushing the tourism industry. The arrival of 8,905,273 tourists to Melaka in 2009, a significant increase at 23.6% compared to 2008 is an indication that this industry has become a sector of major importance in the Melaka economy (Unit Promosi Pelancongan, Melaka, 2009). Melaka being the second smallest state in Malaysia is the wealthiest when it comes to history and culture. Due to its varied, year-round attractions, it is one of most popular visitor destinations in Malaysia. Tourism Promotion Division of the Melaka State Government has played a pivotal role in identifying, promoting and marketing of Melaka historical and heritage sites domestically and internationally using themes such as "Visit Historical Melaka Means Visit Malaysia". The effort of Melaka government to enhance the tourism development especially in promoting the significant historical sites demonstrates a highly committed work to strategically put the state to the world map, but of course with great local community support.

Visitors to Melaka often go to heritage sites, notably the museums and colonial buildings and historical ruins. Many seek what has sometimes been called a "learning-oriented" experience. To facilitate learning, state government through its agencies such as Melaka Museum Corporation and Melaka City Municipal Council identify several important sites as reflected in the heritage trail map, which is funded by the American Express Foundation. This heritage trail functions as self-guided trail that it serves as bilingual interpretation board, strategically located at each historical site. Other existing information is garnered through guidebooks, leaflets as well as through labelled exhibits and docent-led tours.

Generally, visitors arrive at their destination already knowing where to go and what to see. Unfortunately, the amount of information in the form of interpretation board is insufficient thus impede the visitors to learn more. For example, visitors frequently complain that such information in traditional writing sometimes inadequate as visitors cannot capture or imagine the past. As reported by Johari (2010) many visitors could not find answers during their encounter at large tombstone with Dutch and Portuguese inscriptions laid against the wall of the church and why there is no roof over the church. Moreover, a visit to A Famosa or Porta de Santiago was assumed meaningless as visitors wonder on the existing structure as it portrays as if enter at the front, exit at the back, like one enters a door. The interpretation board, which is located quite far from the main entrance does not supply the answer to common questions such as the technical specification, i.e. height, width, materials and decorations used, e.g. as one would notice sea corals at the entrance arch or embossed but, blurred texture of Portuguese army holding sword and why is the survived bastion is named after Santiago. Perhaps, this scenario confirms with Johari (2010) that among seventeen attributes studied, only



monumental ruins registered dissatisfaction signifying that not many visitors know about Melaka's ruins especially A Famosa, the famous icon of Melaka.

Quoting from Irwin (1983), A Famosa was built by the forced labour of 1,500 royal slaves, who were recruited by Albuquerque after he had overpowered the Sultan. Sadly enough, the Portuguese erected their fortress on the ruins of the great mosque of Melaka and constructed it, with stones taken from Malay religious buildings and from graves of former Malay Sultans. Work on the fortress begun in September 1511 and completed in the following January and it was built on the left or southern bank of the Melaka river, close to the estuary. Such an amazing short story like this would be valuable once visiting the A Famosa. Said another way, the authentic look of the ruin is deficient when visitors cannot find the answers to the self-raised questions as they become even more curious when the answers cannot be found in the interpretation board. Johari (2010) recommends employing an on-site guide at the ruins who provide live commentary to the visitors, might increase visitors' understanding and interest in the sites. Moreover, this on-site guide could perhaps create a flashback of the past with his/her interesting narration on the history of the ruins and simultaneously entertain questions that will be raised by the visitors.

The employment of an on-site guide on contractual basis is suggested in order to ensure the successful operation of a heritage site but first the site personnel should be knowledgeable and hospitable to visitors as interaction between them are likely to affect visitor satisfaction level. Possibly, the challenge to implement this approach would be likely that the guide to possess superior knowledge of Melaka historical landscape. Therefore, the introduction of interpretive media at heritage sites may allow the visitors, through its applications, to imagine and understand the sites of no longer exists such as part of demolished A Famosa complex and the original landscape of Dutch Square according to artist impression, or the original Melaka Sultanate Palace based on Malay Annal. Although heritage interpretation is a central component of the modern heritage industry there has been a little concern by the Melaka Government on how visitors to Melaka heritage sites make use of interpretive media. This paper might report a study of visitors' use of interpretive media i.e. information kiosk commonly employed at heritage sites. Interpretation is an important component of the visit for many people, although visitors differ in the interest and attention they display to the interpretive media. A planned visit to Melaka Town heritage sites places the visitor in a rich contextual environment that encourages sensory investigation and promotes experiential learning (Chye & Wee, 1998). At its very simplest, the site provides opportunities for learning and/or reinforcement of ideas, facts and concepts. The historical environment fosters an aesthetic understanding as visitors investigate their surrounding by looking, listening, smelling and touching. The implementation of interpretive media might assist the visitors to virtually interact with buildings, objects, people, landscapes and documents. Conceivably, as visitors explore familiar settings, the homes of "people of the past", they make social and cultural discoveries about themselves and others.

## **Literature review**

### **Information Kiosk**

In Banda Hilir setting, the placement of the interpretive media could be placed at a site that all visitors could access to it. A site that receives high visitor influx might probably the best location to place an information kiosk. This kiosk that supplements the interpretation board in Banda Hilir may provide the visitors with an overall sense of the historical landscape as well as other attractions in the vicinity for various visitor



experiences. Information kiosks are used in a variety of different settings and manners, from health care to grocery shopping. Kiosk developers emphasize that with each application, the type of information or service and target population that is desired should be established. The use of kiosks can be very advantageous as they have the ability to enhance the amount of information being dispensed without increasing the necessary number of man hours. With the kiosk technology visitors could obtain information 24 hours per day. Kiosks are also easily updated and can be placed in easily accessible and central tourist locations.

The self service information kiosk has numerous technologies currently available. But the most popular is touch-screen technology to ease navigation through the system (Basilo et.al., 2006). In addition to special features, some kiosks may have facilities to enable telephone calls, printing, card swiping and credit card ordering and internet access. Additionally, the systems have the option of providing dedicated advertising area on the screen to promote products and services (Basilo et.al., 2006). According to Aho (1994), a kiosk is a free standing unit, supported by built in computer and have special features such as touch screen and printer. It interacts with consumers by providing relevant information pertaining to service, product, advertisement and promotional activities. In addition, Wiesendanger (1991), emphasized that kiosk is also used to convey sales messages to potential buyers. On the same subject, Ni & Ho (2005) report that information kiosk is a computer-based device that provides an interface medium between users and information provider. They further discuss that most kiosks are personal computers that have been modified to withstand heavy volume of users if located in a very high visitor attraction centre, operate on long hours and endure under extreme weather conditions such as humidity, dust, rain or hot sun.

ICT media are most appropriate where they serve a specific purpose that cannot be met by traditional media (i.e. interpretation board). There are some important capabilities that ICT media can provide that traditional media cannot and in some circumstances ICT will be the best solution (Heritage Multimedia, 2006). The benefit of kiosk usage has been widely discussed in the literature. For instance, Fox (1993) delineates that kiosk is efficient in meeting goals of customer service, provide quick access to personalized service (Aho, 1994) and facilitate in database collection and reducing employee workload (Wiesendanger, 1991). Perhaps, by placing kiosk in highly trafficked public areas, the government could achieve the cost efficiency of electronic services while providing convenient information access to different user groups (Ni & Ho, 2005). Perhaps, the disadvantages implementing the kiosk should also be highlighted. When considering the implementation of outdoor kiosks, another important consideration is the effect of rainwater. The structure should have waterproof gaskets to prevent moisture from entering the internal electronics and to ensure continued functionality. Another consideration is the effect of the sun. In direct sunlight, the information in the screen will be difficult to see. Thus, the screen should have an extra bright monitor to allow the user to easily see it in sunlight.

### **User acceptance of information kiosk**

The use of information kiosk is an effort to entice visitors to historical sites. In order to fully secure this interest which is translated by the actual use of the system, the behavioural intention to use such system has to be adequately studied. Therefore, underlying theories which explain such behaviour are examined to better capture to notion of users' acceptance.



In order to gain better understanding and to predict whether or not an individual will use an interactive kiosk, it is necessary to understand the consumer behaviour and attitude towards the use of such machines or technology (Ayala & Henderson, 2000). Predicting user's behaviour is generally viewed as quite complex. Nevertheless, there are studies that might be useful to help identify visitor behaviour such as Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB) and Technology Acceptance Model (TAM) (Karahanna, Agarwal & Angst, 2006; Barnett, Kellermanns, Pearson & Pearson, 2006; Wang, Lin & Luarn, 2006; Liu & Louvieris, 2006; Luarn & Lin, 2005). The said theories are in the same concord which, explain the dynamics that drive the intention and the actual behaviour of users. The absence of a direct human contact and the presentation of the tourism product in a virtual form further emphasize the need to understand the dynamics of behavioural intentions.

One of the earliest studies to explain the social behaviour is the Theory of Reasoned Action (TRA). The TRA states that an understanding of an individual's attitude towards certain behaviour could be used to predict that individual's subsequent behaviour. The notion is further supported by the fact that the intention is a good predictor of the actual behaviour (Pennington, 2003; McKnight & Chervany, 1998). Although the TRA seems to suit the current study, it is observed that in a non-voluntary condition where users' articulation of control mechanics of behaviour is relatively limited, TRA rendered less than accurate to predict the actual action. Stemming from this imperfection, Ajzen and Fishbein (1980) further improve the behavioural model with the introduction of Theory of Planned Behaviour (TPB). The TPB incorporates several antecedences of intention, namely attitudes, subjective norms and perceived behaviour control in order to further explain the actual behaviour. The attitude is an individual's positive or negative evaluation of self-performance of the particular behaviour (Ajzen & Fishbein, 1980). Said another way, that concept is the degree to which performance of the behaviour is positively or negatively valued. As such, this might explain the actual use of the information kiosk and the extent of visitors' voluntaries of using the kiosk. The subjective norms on the other hand, are an individual's perception of social normative pressures, or beliefs whether or not he or she should perform such behaviour (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). This behavioural construct can be affected by the situational conditions, demographic constraints and cultural influences. Whereas, the perceived behaviour control is further explained as an individual's perceived ease or difficulty of performing the particular behaviour (Ajzen & Fishbein, 1980). It is assumed that perceived behavioural control is determined by the total set of accessible control belief. It is this perception of control that forms a conviction that one can successfully execute the behaviour required to produce the intended outcome. For this reason, the information kiosk is designed to incorporate ergonomic and user friendly features.

However, based on the TRA and TPB, Wang and Shih (2009) present a new perspective in an effort to further enrich the understanding of users' behaviour. Citing from behaviourist theory proposed by Ajzen and Fishbein (1980), the authors lay down four antecedences of behavioural intention. These elements are 1) performance expectancy; 2) effort expectancy; 3) social influence and 4) facilitating condition. For the first variable, Wang & Shih (2009) explain that a user with high performance expectancy is more likely to use information kiosk than user with lower performance of expectancy. Performance expectancy as defined by Venkatesh et al. (2003, cited in Wang & Shih, 2009) is the extent to which a user believes that using information kiosk will help him/her to attain gains in government-related information access/processing. Eventually, with high performance expectancy, a positive impact on the behaviour intention to use such system



is expected (Lam, Cho, & Qu, 2007). They also suggest that the performance expectancy both significantly affects the behaviour intention and attitude.

The second variable is characterized as the extent of ease associated with the use of information kiosk (user friendly). Although Wang & Shih (2009) found a significant correlation between the effort expectancy and the behaviour intention, some studies rank effort expectancy as secondary elements for which having a significant impact (Park & Gretzel, 2006). Other studies also empirically construe the findings of Wang & Shih (2009) that effort expectancy is to have a direct impact on the system use (Wober & Gretzel, 2000). Other variable such as social influence is described as the extent to which a user perceives that he/she should use information kiosk (Wang & Shih, 2009). The authors found that the social influence significantly affect the behaviour intention. The role of such social influence in shaping the behaviour intention is further supported by Lam, Cho and Qu (2007) that certain belief may directly and significantly affect the intention to use such information system.

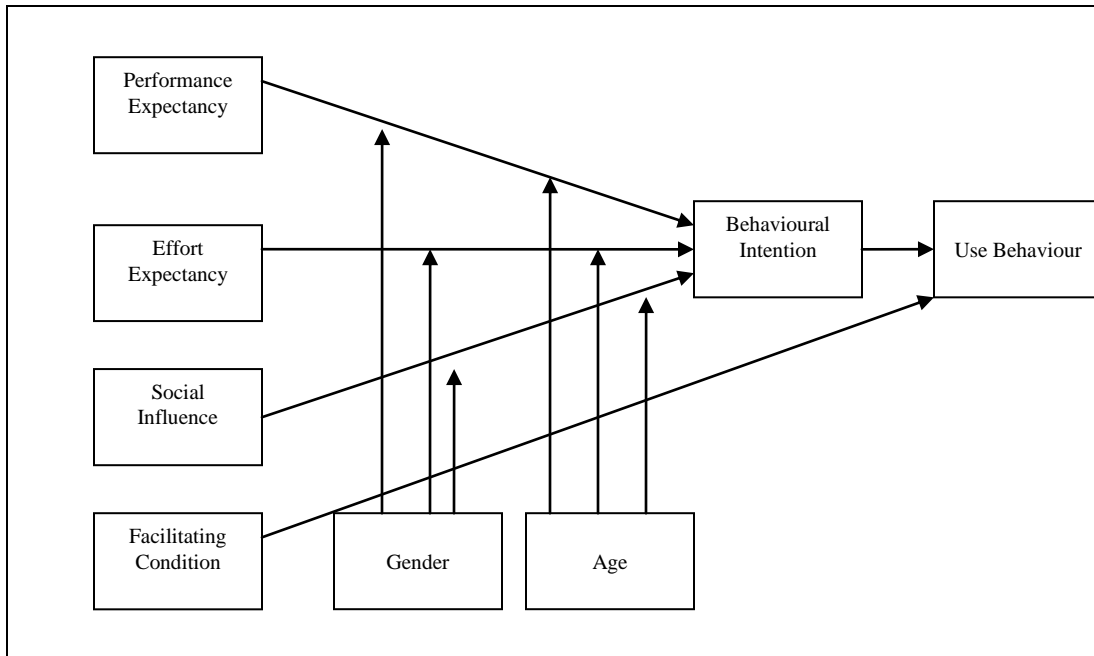
Wang & Shih (2009) also suggest that demographic nature of subjects can somehow affect the relationship between the antecedences and the intention. Such factors are the age and gender. As for the gender, male and female subjects are known to have different preferences to decide on the use of a system. The tendency of male subject to use a given system is likely influenced by their perception of the usefulness of the system albeit the outcome (Ong & Lai, 2006). While, female subjects prefer to use such system if they perceive that the system is easy to use relative to their self-efficacy. Similarly, age factor can influence the intention of a subject to use the system. Therefore, incorporating these demographic factors into the UTAUT model can better predict the users' behaviour. Finally, facilitating condition is defined as one who believes that an organizational and technical infrastructure exists to support the use of information kiosk.

### **Conceptual Framework**

Based on the theory of reasoned action described by Ayala & Henderson (1995), an individual's subsequent behaviour can be predicted by understanding his/her attitude toward certain behaviour. Therefore, an individual's attitude and belief toward the action of technology or machine may lead to a conduct whether one will be likely using an interactive kiosk. In order to facilitate this conception, the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Wang and Shih (2009) which is based on the original UTAUT Model developed by Venkatesh et. al. (2003) will be used (see Figure 1.0). The UTAUT suggests that behavioural intention or use behaviour is determined by four factors i.e. performance expectancy, effort expectancy, social influence, and facilitating conditions. These four determinants are supported by two variables, gender and age which have been simplified from the original version by Venkatesh, Morris, Davis & Davis (2003). Based on Venkatesh et al. (2003) UTAUT Model, there are four variables indicated to measure the influence of the core determinants towards behavioural intention. In addition to gender and age, Venkatesh et al. (2003) includes experience and voluntariness of use in their model. However, these last two factors are excluded in the study as they have been indirectly measured by the primary four antecedences (Park & Gretzel, 2006). Perhaps, this was the basis to exclude variable experience and voluntariness of use in the moderating factors originally developed by Venkatesh et al (2003).



**Figure 1.0**  
**The UTAUT Model**



(Source: Wang & Shih, 2009)

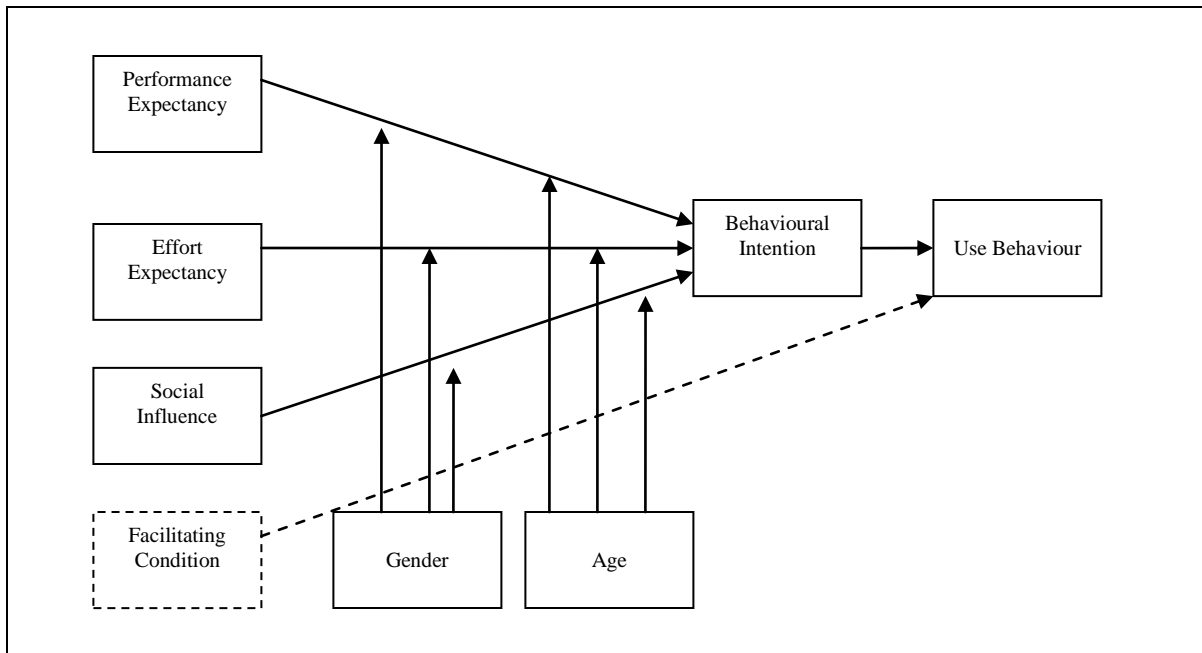
Based on the UTAUT, facilitating condition is hypothesized to be the determinants of use behaviour while performance expectancy, effort expectancy, and social influence are hypothesized to be the determinants of behavioural intention that may signal type of use behaviour of information kiosk. Be that as it may, this paper will employ these four factors in UTAUT introduced by Wang and Shih (2009) to support the needs to understand the likelihood of visitors to use the information kiosk in Melaka Town. On the other hand, based on our refined model in Figure 2.0, the facilitating condition factor is given a weightless form since this study concentrates on visitor in open historical setting whereby they are presumed to be independent while accessing the information as the kiosk is designed to be user friendly, thus requires minimal supervision.

Furthermore, with the existing Melaka administration structure and function, it is proposed that the management and maintenance of the information kiosk will be handled by the local municipal council which will play role as the technical infrastructure support. In addition, given that the information kiosk is a new channel in distributing tourism information in Melaka Town, it is advisable that Melaka Government is willing to nominate Melaka City Municipal Council to appoint specialized contractor to handle any complaints derived from the usage of kiosk. In order to examine the potential of moderating effects in the respondents' acceptance towards the usage of the information kiosk, demographic parameters i.e. age and gender will also be measured. These demographic factors, as suggested by the literature, somehow influence the relationship between the core determinants and behavioural intention.





**Figure 2.0**  
**UTAUT Model**



(Source: Modified from Wang and Shih, 2009)

### Kiosk configuration

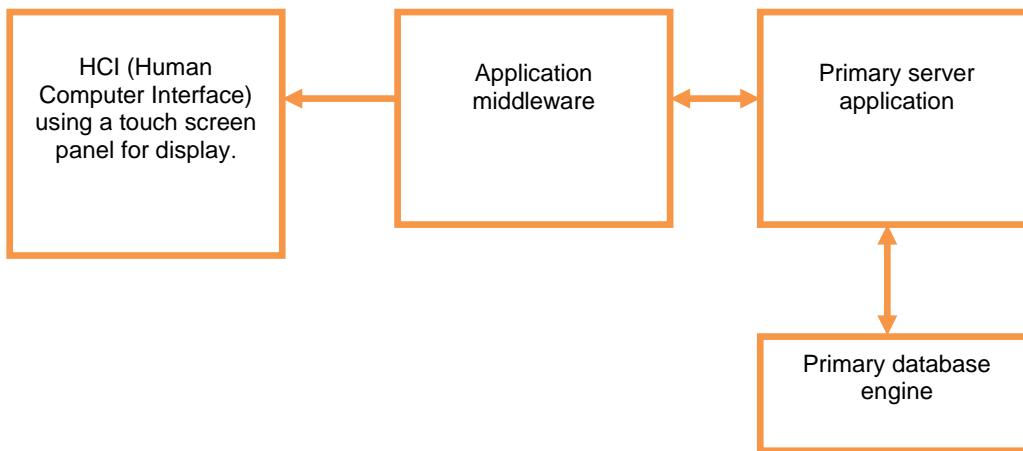
The use of information kiosk at tourist spot is not a new approach. However, the use of digital content for visitor information kiosk is relatively limited. Given the scenario of rapid progress in the evolution of information technology and a higher computer literacy among visitors as well as the declining price of producing digital content, having use the information kiosk is a possibility that should not be sidelined.

The proposed information kiosk for visitor may incorporate the use of textual, visual and audio information type. Taking the advantage of the off-shelves applications, primarily MySQL (structured query language) database engine and PHP (hypertext preprocessor) language, the kiosk is expected to enhance visitors' experience at places of interest. The information kiosk is primarily designed to impart further information during site visit. However, information on other places of interest is also provided that it could help induce further interest to visit (Hyde, 2008; Xiao & Smith, 2007). In addition, the structural design of the proposed information kiosk relies heavily on user-centred approach. Based on the framework suggested by Wang & Shih (2009) and Ndubisi & Jantan (2003), this approach should accommodate the discussed antecedences of behavioural intention in order to positively affect the use behaviour. Translating these variables into a practical efficacy remains the nexus of the system's implementation, as the investment in the system should, to a certain degree, promote a positive impact on the tourism products. Figure 3.0 shows the basic structure of the proposed information kiosk in which the Human Computer Interface (HCI) forms the main boundary between the system and the visitors.



The interface design is carefully crafted to promote a user-friendly environment of which in turn help to influence performance expectancy, effort expectancy and social influence. These elements stand as part of behavioural intentions. Therefore, the interface design should encompass artistic traits such as a clear contrast between the foreground and the background, easy navigation of contents and clearly written textual information. Another HCI design base that aids the behavioural intention towards the system is the feature that help to characterize the reduced cognitive, sensory and motor capabilities of certain group of visitors (Blythe, Monk, & Doughty, 2005). As such, the textual information is further supported with visual and audio information.

**Figure 3.0**  
**Information kiosk structure**



A touch screen panel is used that it allows a better interactivity and promote an ease of use. A fast and easy access to the requested content can further influence positive users' behavioural intention towards the use of the system (Huh, Kim, & Law, 2009; Ndubisi & Jantan, 2003). The placement of icons on the touch screen panel is tailored to account for "touch field" factor in which elements such as size, location, space and density of icons are properly designed and placed. These elements are to be factored into the touch screen display that they are rated by users as top priority (Huang & Lai, 2008).

System reliability and availability as well as information quality form a strong set of factors that affect the attitude and intentions of users to use an information system (Kim, Lee, & Law, 2008). All these three variables stems from the parsimony of the system controller. Therefore, from the perspective of the administrator who exercises the control over the information system, the application middleware is designed to allow periodic system and information update located in the primary database engine. This feature allows a better information management of the places of interest as well as system reliability and availability. Effectively, a properly managed information system helps to encourage a constructive behavioural intention of the users. The server functions as a dispatcher between the application middleware and the information stored in the database engine. The proposed server is not a separate hardware. Rather, it is technically application software that handles requests from the users which is parsed through the application middleware and fetches the required information from the database engine.



Overall, the basic structure of the proposed information kiosk assimilates a commonly used information system model. However, features of which the structure integrates, taking into consideration the theoretical framework proposed by several literatures, helps to enhance behavioural intention and eventually the use of the kiosk itself. Perhaps, it is believed that the next challenge for the system developer is to assimilate the theoretical aspects of the design base into a tangible product. It is therefore, imperative for the developers to consider the user-centered design approach to promote a better use of such visitor information kiosk and eventually help boost the visitor arrival.

### Determining Suitable Location

In order to find appropriate location for placing the information kiosk, probably there is a need to identify the area that receives high visitor concentration. Also, the evaluation on the recommendations of kiosk placement from other stakeholders such as local community and Melaka authorities could be considered. However, in Melaka heritage trail, at least ten possible locations are to be evaluated for kiosk placement. To ensure the choosing of suitable locations, a set of criteria will be based on Basilia et. al. (2006) where they classify certain attributes based on visitor's interview. The criteria discussed were high tourist traffic (areas which have the highest flow of visitors), well lit area (promote the safety of the area and make the kiosk as visible as possible 24 hours per day), near ATMs and telephones (obtain local currency and report crimes or maintenance of the systems), visible/central locations (allow visitors to easily locate the kiosk to obtain information), near major accommodation, near bureau de change, protected from the elements (since most kiosk systems are not suited for outdoor locations, indoor locations or partial indoor locations are reviewed) and proximity to current information centre (but not limited as the intention is to make information available in various areas of tourist traffic within the city).

**Table 1.0**  
**Evaluation of potential kiosk location**

No.	Attribute	Highest tourist traffic	Well lit area	Near ATM/Public Telephone	Visible & central location	Near major accommodation	Near Money changer	Near food outlets	Indoor location	Near info centre
1.	Baba Nyonya Museum		X			X		X	X	
2.	Cheng Hoon Teng Temple	X	X		X			X	X	
3.	Masjid Kampung Keling	X	X		X			X	X	
4.	Sri Poyyatha Temple		X		X			X	X	
5.	Stadthuys	X	X		X	X		X	X	
6.	Christ Church	X	X		X	X		X	X	X
7.	St Paul Church	X	X						X	
8.	A Famosa (Porta d.Santiago)	X	X	X	X	X	X	X	X	
9.	Melaka Sultanate palace	X	X			X		X	X	
10.	Independence Memorial	X	X	X	X	X	X	X	X	

Therefore, in this study, based on the appropriateness and observation of Melaka Town heritage landscape, the evaluation of potential kiosk location is tabulated in Table 1.0. It is doubtful to expect that any location would meet all of these criteria therefore the locations which exhibit a majority of these criteria will be considered for kiosk placement (Basilia et.al., 2006). Nevertheless, it is required that the chosen locations be well lit, have 24-hour access, be visible or central locations and have the necessary enclosure or ability to add an enclosure, in order to protect the components of the kiosks. In addition, according to work by Basilia et. al. (2006), not all kiosks need to be located near ATMs, telephones, hotels, bureau de changes or current information centers. Even so, it is



advised, that the full set of kiosk locations, taken together, be placed in the proximity of these types of venues. Based on Table 1.0, after having considered the ten locations which majority fit in with the attribute discussed, sites chosen would be A Famosa and Stadthuys as the locations are producing high tourist carrying capacity (receive high tourist arrival). Having considered that Christ Church is located nearby Stadthuys and because the nature of the building functions as religious place, it is inappropriate to position the kiosk. One of the factors could perhaps, it limits visitor access into the church compound. Logically, Stadthuys or the red structure is chosen as it currently serves as Ethnography Museum, thus become centre of attraction among visitors for both locals and foreigners. The most advantage of these two sites is in general that they receive high visitor arrival. In addition to determine suitable information content for the kiosks, much of the information will be gained through visitor interviews. Through interviews, the researcher would identify where visitors typically look for information and their first few tasks upon arrival as it lead to the direction of their needs. Probably, the information garnered will be the basis to evaluate on the visitors utilization of information kiosk. Basically, as a general idea, the content of the kiosk would cover the history of the site and physical view of old and new historical landscape. Upon reaching the information kiosk, the visitor could explore all the information they want to know about the ten sites which is included in the heritage trail.

### Research Design and Data Gathering

In order to fulfil the research objectives and describe the likeliness of visitors to use information kiosk in Melaka Town, a descriptive research design through a set of structure interview will be conducted. Since the study will be done in an open historical setting, administered intercept interview that target respondents in centralized location is suitable to gain opportunities for feedback from the respondents as it offers two-way communication should the respondents need further clarification (Mahmud, 2009).

**Table 2.0**  
**Factors in UTAUT**

Factors	Statements Pertaining to the Factors
Performance Expectancy	Statements 1 – 4: <ul style="list-style-type: none"> <li>• Useful in information access and processing.</li> <li>• Enable to accomplish tasks of information access and processing more quickly</li> <li>• Increases productivity of information access and processing</li> <li>• Increase ability to get timely information.</li> </ul>
Effort Expectancy	Statements 5 – 9: <ul style="list-style-type: none"> <li>• Interaction with information kiosks would be clear and understandable</li> <li>• Would be easy for user to become skilful at using information kiosk</li> <li>• Would find information kiosk easy to use</li> <li>• Learning to operate information kiosks is easy for me</li> </ul>
Social Influence	Statements 10 – 13: <ul style="list-style-type: none"> <li>• People who influence me will think that I should use information kiosks</li> <li>• People who are important to me will think that the I should use</li> </ul>



- information kiosks
- The seniors in my organization have been helpful in the use of information kiosks.
- In general, my organization has been supported the use of information kiosks

Behavioural Intention

Statements 14 – 17:

- I intend to use information kiosks in the future
- I predict I would use information kiosks in the future
- I plan to use information kiosks in the future

(Source: Wang &amp; Shih, 2009)

The questionnaire will comprise 15 items adopted from Wang and Shih (2009) and the respondents were asked to express their opinion on a seven point Likert-Scale instrument with 1 being strongly disagree and 7 being strongly agree. Respondents will be asked to weigh their agreement for all three factors that will be measured which are represented by 4 dimensions for each factor (see Table 2.0). A demographic background of respondents will also be included in the questionnaire to facilitate the study in shaping the relationship between the determinants and behavioural intention based by age and gender.

### Conclusion

Based on the UTAUT and previous literature, this study explores the determinants of use behaviour of information kiosks and investigates the moderating effect of gender and age differences on the relationships between the determinants and behavioural intention/use behaviour. The touch screen feature of the kiosk presentation allows the visitors to easily select the information needed. This personalized approach may gradually become increasingly common in the heritage sector in Melaka in the near future should the kiosk usage for heritage interpretation is implemented.

The findings of this research might also provide several important implications for the practice of information kiosks at heritage sites. Perhaps, there are some limitations in the use of kiosks. Firstly, kiosk usage is generally favored by individuals who are more computer literate. It is therefore a challenge to try to encourage the fewer computers literate to use the kiosk. Secondly, kiosk usage is still new in Melaka Town heritage trail. As such, the level of usage is still low and visitors must be encouraged to explore these kiosks. Having discussed the kiosk implementation in Melaka Town and with the proposed framework to analyze whether kiosk technology can be employed, it is hoped that this project may bring competitive and strategic advantage to Melaka State Government.

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