2.0 Introduction

This chapter is to explain the chosen methods to obtain the primary data in order to achieve the objectives of research. There are five sections in this chapter. The first section briefly describes the concept of research design, followed by a discussion of the methods chosen in this research. The second section outlines the seven main objectives of the research, and the five hypotheses to achieve the predetermined objectives. The third section focuses on issues related to methods of data collection and questionnaire development. The final section explains the sampling procedures and techniques to obtain the primary data from the respondents.

2.1 Approaches to the Research Design

In order to choose the best research design for this study, there are two factors to consider. These factors affected the selection of research design in terms of methods of data collection and analysis. In addition, these factors highlighted the dilemmas faced in this study due to differing types of respondents and the balance of qualitative and quantitative materials.
Chapter Two: Research Methodology

2.1.1 Types of Respondents

With respect to the phenomenon of local community involvement in sustainable cultural heritage management, it is essential to identify the potential respondents who are closely connected with the local community in order to provide valuable input to this study. It was appropriate to identify differences between the needs, desires, and perceptions of each respondent towards the involvement process. Moreover, by considering the limited budget and time scale available, it was necessary to choose the respondents that could provide insightful knowledge to this study.

For this study, three groups of respondents were identified (local residents, stakeholders and tourists) due to their strong connection with the attractions along Melaka heritage trail (see Figure 2.1 and Table 2.1). Firstly, the local residents along Melaka heritage trail. The population of the local community encompasses various types of residents in terms of socio-demographic backgrounds such as mixed ethnic groups, religious belief, and culture and heritage identities (see Section 3.4 in Chapter Three: Background to Malaysia). Secondly, key stakeholders that played a major role in developing the Melaka heritage trail. These include the local authorities from diverse group of departments such as tourism and the city council. Finally, as the development of Melaka’s heritage trail is considered a tourism product to enhance tourists experience and satisfaction international and domestic tourists were chosen in order to provide additional information regarding their perceptions towards the Melaka heritage trail. The selection of respondents is pivotal, in order to adopt an appropriate research strategy for this study. Hence, the research process, such as, data collection techniques, sample of population size, questionnaire design and data analysis can be planned in advance.
Figure 2.1: Attractions along the Melaka Heritage Trail
Source: 1001 creations, 2011
### Table 2.1: Stakeholders along the Melaka Heritage Trail

<table>
<thead>
<tr>
<th>10 major attractions along the Melaka Heritage Trail</th>
<th>Stakeholders at each heritage trail attraction</th>
<th>Residents at each heritage trail attraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Malacca Tourist Information Centre</td>
<td>• Ministry of Culture, Arts And Tourism</td>
<td>Not residential area</td>
</tr>
<tr>
<td></td>
<td>• Melaka Museum Corporation (PERZIM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Melaka Historical City Council (MBMB)</td>
<td></td>
</tr>
<tr>
<td>2. Malacca River</td>
<td>• MBMB</td>
<td>Not residential area</td>
</tr>
<tr>
<td></td>
<td>• River boat operator</td>
<td></td>
</tr>
<tr>
<td>3. Baba Nyonya Heritage Museum</td>
<td>• Small-scale business entrepreneur</td>
<td>Hang Jebat Street</td>
</tr>
<tr>
<td></td>
<td>• Private property</td>
<td>Tun Tan Cheng Lock Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnic representative: Malay &amp; Chinese</td>
</tr>
<tr>
<td>4. Cheng Hoon Teng Temple</td>
<td>• Small-scale business entrepreneur</td>
<td>Hang Jebat Road</td>
</tr>
<tr>
<td></td>
<td>• Private property</td>
<td>Lekiu Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hang Kasturi Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnic representative: Chinese</td>
</tr>
<tr>
<td>5. Kampong Kling Mosque</td>
<td>• Small-scale business entrepreneur</td>
<td>Hang Jebat Road</td>
</tr>
<tr>
<td></td>
<td>• Private property Melaka historical city council</td>
<td>Lekiu Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hang Kasturi Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnic representative: Malay</td>
</tr>
<tr>
<td>6. Sri Poyyatha Vinayagar Temple</td>
<td>• Small-scale business entrepreneur</td>
<td>Hang Jebat Road</td>
</tr>
<tr>
<td></td>
<td>• Private property</td>
<td>Lekiu Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hang Kasturi Road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethnic representative: Indian</td>
</tr>
<tr>
<td>7. Christ Church</td>
<td>• PERZIM</td>
<td>Not residential area</td>
</tr>
<tr>
<td></td>
<td>• MBMB</td>
<td></td>
</tr>
<tr>
<td>8. St. Paul’s Historical Complex</td>
<td>• PERZIM</td>
<td>Not residential area</td>
</tr>
<tr>
<td>i. Stadhuys</td>
<td>• MBMB</td>
<td></td>
</tr>
<tr>
<td>ii. St Paul’s Church</td>
<td>• Small-scale business entrepreneur</td>
<td></td>
</tr>
<tr>
<td>iii. Porta De Santiago</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Malacca Sultanate Palace</td>
<td>• PERZIM</td>
<td>Not residential area</td>
</tr>
<tr>
<td></td>
<td>• MBMB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Small-scale business entrepreneur</td>
<td></td>
</tr>
<tr>
<td>10. Proclamation of Independence Memorial</td>
<td>• PERZIM</td>
<td>Not residential area</td>
</tr>
<tr>
<td></td>
<td>• MBMB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ministry of Culture, Arts And Tourism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Tourism Board and Promotion</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author’s fieldwork, (2011); MBMB, (2011); PERZIM, (2011)
2.1.2 The Qualitative or Quantitative Debate

Various schools of thought have continuously debated the pros and cons of qualitative and quantitative research methods. This debate over research methods has served to advance the validity of each approach, ranging from data collection to analysis. For example, qualitative researchers argued that their method of research (i.e. interviewing or observation) is appropriate to allow the researcher to get closer to the data (i.e. individual’s perspective). Meanwhile, researchers with quantitative method claim that their statistical or mathematical findings provide more reliable results. In addition, with respect to the issues of research funding and time consumed collection, many quantitative researchers have suggested that the fieldwork survey is much easier and cheaper when dealing with large samples (i.e. postal questionnaire). Conversely, qualitative research requires small samples, flexible and its purposive sampling. The differential dimensions of each approach are summarised in Table 2.2.

However, Andriotis (2000) argued that in terms of the usage of both methods in practice, neither approach is superior or inferior. Besides, both approaches are valid and contribute to social research, and over-reliance on any approach is inappropriate (Punch, 1998).
Table 2.2: Qualitative versus quantitative research

<table>
<thead>
<tr>
<th>Comparison dimension</th>
<th>Qualitative research</th>
<th>Quantitative research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of questions</td>
<td>Probing</td>
<td>Limited probing</td>
</tr>
<tr>
<td>Sample size</td>
<td>Small</td>
<td>Large</td>
</tr>
<tr>
<td>Information per respondent</td>
<td>Much</td>
<td>Varies</td>
</tr>
<tr>
<td>Administration</td>
<td>Requires interviewer with special skills</td>
<td>Fewer special skills required</td>
</tr>
<tr>
<td>Type of analysis</td>
<td>Subjective, interpretive</td>
<td>Statistical, summarisation</td>
</tr>
<tr>
<td>Hardware</td>
<td>Tape recorders, projection devices, video, pictures, discussion guides</td>
<td>Questionnaires, computers, printouts</td>
</tr>
<tr>
<td>Ability to replicate</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Training of the researcher</td>
<td>Psychology, sociology, social psychology, consumer behaviour, marketing, marketing research</td>
<td>Statistics, decision models, decision support systems, computer programming, marketing, marketing research</td>
</tr>
<tr>
<td>Type of research</td>
<td>Exploratory</td>
<td>Descriptive or causal</td>
</tr>
</tbody>
</table>

Source: McDaniel and Gates (1993)

In the case of community participation studies, Israel, Eng, Schulz, Parker and Satcher (2005) argued that both data collection and analysis for this topic have involved qualitative and quantitative approaches. This is suggesting the mixing of both methods is not unusual to enrich the research data. Meanwhile, in the field of tourism study, Ballantyne, Packer and Axelsen, (2009) reviewed 12 journals from 1994 to 2004 (a total of 2868 articles) and found that 59% of these articles used quantitative research, while only 19% took a qualitative approach. The remaining 6% used a mixed method and 16% were review or theoretical articles.

According to Xiao and Smith (2006) the selection of qualitative or quantitative research is due to the changing of study interest (tourism study) from industrial to social science perspectives since 30 years ago. To date, the existing research disciplines (e.g. sociology, anthropology, and psychology) are now interested in the subject of community participation in heritage and
tourism management by adopting mathematical and statistical analyses (quantitative approach). Since, quantitative methods are widely been used especially for conducting questionnaire surveys, this study has adopted this method and technique. In addition, qualitative type questions were also adopted in this field. However, the analyses for qualitative questions were not explored to the same depth as qualitative research. In fact, this data was used as supporting information for quantitative data analyses and discussions.

2.2 The Research Process

This section will discuss in greater detail the sequential steps for the planning of the adopted research process. In practice, there is no overall consensus about the stages to be followed during research (Robson, 1993). Different models have been proposed by many authors (e.g. Ryan, 1995; Schutt, 1996; Veal, 1997; Aaker, et al., 1998; Punch, 1998). This thesis has proposed seven steps of research in terms of process:

1. Selection of research design and study area
2. Determination of research aim, objectives and hypotheses
3. Data collection techniques
4. Data collection process
5. Sampling design
6. Questionnaires design
7. Data analysis
2.2.1 Selection of Research Design and Study Area

The importance of this study (see Chapter One) and the formulation of research problems (see Chapter Three and Four) have been discussed in previous chapters. This section is to reflect on both justification and research problems, in order to determine the soundest research strategy for this study. Furthermore, the above discussions (see Section 2.1) have influenced the direction of this research towards the exploration of local community involvement in cultural heritage management in Malaysia.

A case study approach has been chosen to mobilise this study to answer the research questions and to achieve the research objectives as stated in Section 2.2.2. In general, the Melaka World Heritage Site (WHS) was chosen as a case study area and the reason for selecting Melaka WHS as an appropriate location for this research was due to the following factors:

- As the first city in Malaysia (combined with Georgetown WHS) that has been nominated as WHS from UNESCO in July 2008, these cities have received great attention from both Federal and State Governments especially on funding to conserve and manage cultural heritage resources. However, there is little attempt by academic scholars to examine the effectiveness and impacts of the practices of community participation in cultural heritage management.

- Since the nomination as a WHS, Melaka is now experience a growing profile as a major tourist destination in Malaysia. Again, little attempt has been made to investigate the sustainability between tourism development and cultural heritage management.
- Since the government introduced a concept of an ‘open-market’ scheme (see Section 5.4.1), to allow for foreign investment in Melaka to enrich the prospective market, it is necessary to investigate whether the local community has received positive benefits or negative implications from this initiative in terms of employment and local facilities.

The selection of heritage trail development as a dominant case study for this research is to enable investigation of the local community involvement in heritage trail development. In particular, the Melaka Heritage Trail was used as a direct application to investigate an in-depth analysis of the Civic and Old Quarter areas impact of increased tourism on both community and local business. This is because there are different elements that influence heritage trails development. This trail provides intrinsic information on the management strategy to influence distinctive groups of recipient parties (resident, local authority and tourist). The concept of heritage trail development enables over to investigate through specific case studies the impact and direct involvement of the local community in heritage trail development. It is unusual to find recent research that investigates the relationship between community participation and the functions of the trail as a tool for heritage management. For example, the trail has often neglected as an effective mechanism to manage a place sustainably (Hugo, 1999), to enhance the quality of user experience (Hayes and MacLeod, 2007; Reed et al., 2004; Shafer et al., 2000) and to strengthen the local government’s cultural policy (Hayes and MacLeod, 2008).

This can be argued that the selection of a heritage trail as a case study approach to investigate local community involvement is an appropriate approach to enhance the existing body of knowledge. In addition, the heritage trail development is the finest tourism development that encompasses multiple roles and functions for different groups of people. For instance, the Melaka heritage trail provides benefits for:
a) **Residents:**

- Opportunity to present their cultural and tradition identity (see Section 3.4).
- Receive benefits through tourism activity (i.e economic, social).

b) **Tourists:**

- Increase user experience through ‘contact’ with local community (i.e participate in activity – such as traditional painting).
- Ease for user in terms of orientation in an alien place help users find major heritage attractions.

c) **Local authorities:**

- A management tool to conserve the heritage assets.
- A management tool to control tourist movement (i.e provide safety, avoid vandalism).

d) **Central authority**

- As a tool to enable conservation of culture heritage resources in Malaysia
- A framework to develop ‘culture routes’ in Malaysia

However, no comprehensive study has been made to evaluate the effectiveness of this development. There were little scientific evidence can be highlighted of the interrelationship between three parties who have received benefits from heritage trail development in regard to participation and partnership.
2.2.2 Determination of Research Aim, Objectives and Hypotheses

As been discussed in the earlier chapters (introductory and literature review), it is noted that there is a lack of previous research to recognise the importance of community participation towards managing the cultural heritage assets, particularly in Malaysia. Therefore, with respect to the above argument, this study intends to achieve the following aim:

“to explore the local community involvement in heritage management via participation in heritage trail development in order to promote the local culture and tradition identity”

In particular to this aim, the following research objectives were outlined as follows:

1. To determine levels of attachment among local community towards heritage.
2. To identify the benefits of involving local communities in heritage asset management.
3. To identify the threats to the local community’s involvement in heritage assets' management.
4. To evaluate the current institutional arrangement governing heritage asset management in Malaysia.
5. To assess to what extent the local community is part of the institutional arrangement.
6. To explore the local communities current involvement opportunities in decision-making in the management of heritage and tourism in Malaysia.
7. To examine the constitutional framework governing local community rights in decision making.

In addition to support the following theories and models (see Chapter Four and Five), the research’s hypotheses are outlined as well:

1. Local community has low levels of attachment towards heritage.
2. There is no approach to encourage the local community to recognise their heritage values.
3. Local community is unable to sustain long-term heritage management in Malaysia.
4. It is not feasible to adopt a ‘bottom-up’ approach within the ‘top-down’ management system in Malaysia.

5. Local communities have limited access to be involved in decision-making in management of heritage and tourism in Malaysia.

### 2.2.3 Data Collection Techniques

Two methods of data collection were utilised to obtain data from a variety of sources (see Figure 2.2). The first method is the questionnaire survey, and the units of analysis are residents and visitors. The questionnaire survey is basically the process of asking questions to people who are believed to have the necessary information (Churchill, 1987). It is a technique commonly used in studies that have individuals as the units of analysis. In this research, the sample proportion was particularly to people’s attitudes and perceptions; thus, specific attributes or opinion was measured through a degree of quantification in the analysis process (see Section 2.2.6). In contrast, for the writing of the case study, the research moved beyond the research description design by adopting an explanatory design. This is to investigate the relationship by providing answers to problems and hypothesis. The major purposes of causal design are (Malhotra, 1996, p.97):

- To understand which variables are the causes (independent variables) and which variables are the effects (dependent variables) of a phenomenon.
- To determine the natural relationship between the causal variables and the effect to be predicted.

The second method of data collection is the interview survey, and the units of analysis are the residents and local government personnel. The semi-structured interview with an open-ended question enables the researcher to assess how the resident perceived the economic,
environmental and social impacts from heritage trail development. The application of interview method was used to the local government personnel regarding the current practice of local community involvement and heritage management. The results were compared with data (both qualitative and quantitative) from residents to find any similarity or contradictory arguments.

Meanwhile, the interview survey with the residents was conducted with the same respondents who were involved in the questionnaire survey who were willing to provide, or discuss additional information as stated in the questionnaire’s questions. In the nature of interview technique, the advantages are to allow a greater depth and probing investigation about particular topics (within the questionnaire question(s)). It provides information common-verbal behaviour; enables spontaneity which is more appropriate for revealing information about feelings and emotions (Pizam, 1994). Certainly, interviews were considered the best approach to obtain information from a population that might experience difficulties in answering questions related to evaluating the impacts of heritage trail development. However, as stated previously, the volume of qualitative data from the local community via interview survey was conducted in casual manner. This was due to several limitations, such as, time and financial restrictions, where the survey methods for the other two groups of respondents (local government personnel and visitors) needed to be completed within the same fieldwork time-frame. In addition, as the researcher is familiar with Malaysian cultural, the public are suspicious about answering survey material, as this could be a government strategy to raise income tax due to undeclared income by the local people.
2.2.4 Data Collection Process

In order to simplify the data collection process, there are three major phases of data collection used to construct an investigation into local community involvement in cultural heritage management. Each of these phases was constructed within both qualitative and quantitative methods (see Figure 2.3).
Data Collection Process

Quantitative (Questionnaire Survey) → Qualitative (Interview Survey)

PHASE ONE
Observations – administrative interviews – secondary materials (data)

PHASE TWO
Piloting tools for the measurement
Questionnaires – semi-structured interviews – participant observations

PHASE THREE
Actual fieldwork research
Surveys – follow up semi-structured interviews

Figure 2.3: Data Collection Process
2.2.4.1 Phase One: Observations, Administrative Interviews, and Document Analysis

This is an initial phase in order to gain as much as possible from the information (formal or informal) about the phenomenon of local community involvement, tourism development and heritage management in the Melaka WHS. The concept of heritage trail development in Melaka has been chosen as a case study approach. Therefore, any materials such as physical or formal information (i.e. pamphlets, or brochures – see appendix 2.1) related to the Melaka heritage trail were analysed in order to understand the trail characteristics and to identify stakeholders along the heritage trail.

In addition, a virtual information (i.e. web-blogs, travel agency websites, email correspondence) was also gathered especially from those who have visited and walked along the Melaka Heritage Trail, in order to identify their previous experience from this visit. It is an advantage for the researcher to understand to what extend the visitors perceived the experiences during their visit to the city, whether positive or negative. Besides, this information was used as a guideline to construct questionnaire questions or statements based on real experience from visitors.
Furthermore, email correspondences Malaysian researchers who have conducted any field research were contacted to establish academic networking and to gain additional information to strengthen the research justification and uphold the aim and objectives of this study (see Section 2.2.2).

In addition to the importance of this phase, identification of the key players or stakeholders that were involved, or have direct or indirect ‘connection’ to the heritage trail development were contacted to arrange pre-interview sessions with the researcher. Most of these pre interviews were done over the phone and via emails. More importantly, this approach had a threefold purpose. First, to meet research ethic requirement in terms of consent to conduct a survey, and interviews were requested (formal and informal procedure via Melaka’s authority and direct communication with stakeholders) before undertaking actual fieldwork in Melaka WHS in April 2011. Second, the most valuable outcomes were the contact with community members (stakeholders) for involvement in fieldwork surveys, which began through the technique of ‘snowballing’ (Valentine, 1997). Finally, to support the construction of questionnaire and interview themes; the initial information gathered from these groups of people would be essential in understanding the local community and heritage trail development in this city.
2.2.4.2 Phase Two: Pilot Testing Questionnaire Survey, Interviews and Observations

The initial data collection in Phase 1 prompted the construction of questionnaire surveys (for residents and visitors) and themes for semi structure interviews (for residents and local government personnel). In the second phase, a fieldwork visit and site assessment for testing the questionnaire (see Section 2.2.7), interviews and observation was conducted.

A) Process for Pilot Testing Survey

In terms of constructing the questionnaire design, this phase is essential to confirm the validity and reliability of the conceptual contents in the questionnaire questions. Meanwhile, a pre semi structure interview session with several stakeholders would allow the research to develop additional topics in order to extend the context of discussion towards local community participation during the actual fieldwork. Since the survey took place at the respondent’s workplace or residence, during the interview the researcher could observe and collect visual information concerning the natural environment of the respondent, such as a direct observation...
to identify possible biases, influences or inaccurate replies given by respondents. However, this technique requires experiences from researchers in order to do the observation assessments.

In addition, this phase also allowed the researcher to find a best strategy to conduct a questionnaire survey among the visitors. Therefore, a small experiment was conducted to ensure the researcher had a similar experience to the visitors, while walking along the Melaka Heritage Trail. Moreover, this exercise gave additional information that could improve the questions regarding visitor’s awareness and experience. Research assistants conducted this experiment and in this case, they were known as a control group respondent. Ten research assistants participated in this exercise, and everyone started to walk along the trail route from a different starting point. This was to avoid any time-frame bias in terms of individual pace, or avoiding ‘boring’ attractions. Moreover, along with this practice, research assistants were asked to record (written) their sense of enjoyment or attractions that made them interested in staying ‘on’ or ‘off’ the trail a bit longer, for instance, observing the iron work by the local resident (Figure 2.4).

Figure 2.4: Handmade kitchen utensils by local resident
Source: Author’s fieldwork (2011)
The rationale of using this exercise while walking along the trail was to ensure the control group ‘visitors’ had the same experience as the normal visitor. Besides, the local community’s daily activities were observed by the researchers as well. The observations were kept as a written diary, later it would be used to improve the questionnaire survey, as well as the development of participant interview prompts.

**B) Research Assistant for Fieldwork Survey**

In order to speed up the fieldwork survey, research assistants were required. The researcher established a ‘standard’ requirement for those who wanted to take part in the research team. This was to ensure the research assistant could work independently without full time monitoring by the researcher. Therefore, the students (undergraduate and Postgraduate - mostly Master’s students) from the local university (Universiti Putra of Malaysia) were selected. This was because the researcher was one of teaching staff in this institution. In particular, the students must have at least completed the proposal for their final year dissertation. In addition, the students were selected among those who have similar data collection techniques (i.e. questionnaire survey) in their project dissertation. The purpose of these characteristics was twofold. First, the researcher intended to assist the final year students in getting exposed to survey experiences. Second, the students would be competent and self-confident when dealing with the public during their own survey, and in addition, would share some thoughts on how to improve the survey technique and strategy. Furthermore, the student must be able to speak in English and Malay to an acceptable standard. This is because, the survey for visitors involved foreign internationals. Therefore, the ability to speak in English was essential as it’s a standard international language. As the Malaysian people are from multiple ethnic backgrounds, it was an advantage to have a research team that were able to speak in another common language, for instance, Chinese or Tamil (Indian accent language). As a result, 10 research assistants
Chapter Two: Research Methodology

were selected for the research team (Figure 2.5). However, before the research assistants started actual field work, a brief about the research topic, aim and objectives was explained in details to the research assistants. This was to ensure that the research teams fully understood general points and scope of the research. Moreover, a mock survey was conducted by the researcher in order to build self-confidence in the research team and to improve their survey techniques and skills, especially on how to approach the visitors and encourage them to participate in the survey. In addition, as an honorarium to the research assistant work and voluntary engagement on this fieldwork survey, the researcher paid all accommodation expenses and complementary meals (i.e. breakfast, lunch and dinner) during the survey process. In addition, each research assistant was provided with some cash for their basic expenses during the survey.

Figure 2.5: Research Assistant in Fieldwork Survey 2011
Source: Author’s fieldwork (2011)
NB: Two research assistants were not present during this photography


2.2.4.3 Phase Three: Actual Fieldwork Survey and Follow-Up Interviews

Phase 3 was conducted after the major amendments of questionnaire contents were done. The appointment with local government personnel for an interview was established as well. All the surveys for both resident and visitor were held at the same time of day. As the time and cost have become major challenges for this survey, the researcher assigned a research assistant to facilitate the survey, especially for the visitor's survey.

A) Resident’s Surveys

The questionnaire and interview surveys for residents were conducted by the researcher. This is because, other than conducting the questionnaire survey with the residents, the researcher also needed to conduct a follow-up interview with the same respondents after the questionnaire survey session. However, this interview session was optional for the respondent to participate because not all respondents are willing to spend their time for both questionnaire survey and interview in the same session. Besides, as noted in the Phase 1 and 2, the researcher had established a pre-arranged interview with potential respondents among the local community in
this city. Therefore, the interview session with the resident, in fact, was determined before and would be carried out during the actual fieldwork research (Figure 2.6).

Figure 2.6: Interview with mobile vendors (resident)  
Source: Author’s fieldwork (2011)

Another reason for the researcher to conduct the survey with residents by himself was there were several residents who were not comfortable with paper based survey (see Section 2.2.3). This is due to their concern that the information from these might be used against them in the future. Therefore, as the researcher was the only person who understands this research, it was necessary for the researcher to engage directly with the local community especially to deal with cultural issues (i.e. resident suspicious about the transparency of the research).

B) Visitor’s Survey

The main aim of the visitor’s survey was to determine the visitor’s experience while walking along the trail, hence the research assistants were placed at the 10 major attractions along the Melaka Heritage Trail (see Figure 2.1). The determination of these 10 locations was based on the signpost (interpretive signage) provided by the trail provider and information gathered from Phase 1 and 2 (see Table 2.1). Each of these attractions were posted with at least two
research assistants. This technique is known as a ‘buddy system’. The rationale of this technique is to let the two individuals work together as a small team during the survey, so that they are able to monitor and help each other if the respondent has difficulties to fill in the questionnaire and wishes to further enquire about this research (Figure 2.7).

![Figure 2.7: Research assistant conducting visitor survey](image)

Source: Author's fieldwork (2011)

In addition, the sampling technique for the visitor survey was using a stratified random sampling technique (see Section 2.2.5). There are several reasons why this sampling technique is essential for this research. First, it is to achieve the calculated sample size in a systematic way (see Section 2.2.6). Second, it is a scientific strategy to gain rich data from a diverse range of respondents from different locations, time, and days (see Section 2.2.5.3). Meanwhile, a random sample technique was applied for resident's respondents. It was a straightforward technique because the respondents living in the case study area. In fact, the residents who lived closely to the Melaka Heritage Trail were automatically part of the potential pool of respondents.

The time frame for both types of surveys (residents and visitors) was conducted from 10am until 7pm every day and at weekends. As a routine, during the lunch break, the research team gathered at the ‘meeting point’ with the researcher to report on progress and enquire into
further explanations from the researcher according to the respondent’s response towards the
questionnaire, content, or the research topic. The survey resumed again at 2pm, and this
routine continued throughout the fieldwork.

2.2.5 Sampling Design

In most situations, researchers would like to study the whole population, but realistically, it was
impossible because it was extremely unrealistic, expensive and time consuming. Consequently, it was normal to base research findings on a representative sample. The objective of sampling is to make judgement about the population based on the information obtained from the sample. A sample is a smaller set of elements drawn from a population and is considered to be representative of that population under study (Chua, 2006). Although there are no fixed rules in determining the size of a sample needed; the sample representatively depends on two considerations. First, when the whole population is less homogenous. Second, a large sample would be needed if the population is less heterogeneous (Cunanan and Cruz, 2008). In addition, if the sample size is not well presented, it would affect the overall performance of the data sample. For instance, if the sample size is too small, one would struggle with the data’s validity to provide feasible answers to research questions. Meanwhile if the sample size is too large, apparently time and resources could be wasted. Hence, an appropriate sample size should be careful determined in designing the sampling stage of the study.

As has been noted earlier, the mixed method was selected as part of the research design. Hence, the selection of sampling design should be mixed as well. There are two types of sampling design: probability sampling and non-probability sampling. For the probability sampling, there is a sub-category under this sampling method. This sub-category indicates
systematic ways or techniques in which elements of the population have a chance to be included in the sample. It is quite common for this sampling to involve ‘randomization’ as a feature in selection of the sample. Generally, there are four types of probability sampling techniques. There are: simple random sampling, stratified random sampling, systematic random sampling, and cluster random sampling. Each of these sampling techniques have differing approaches and complexity. In this research, the stratified random sampling and simple random sampling have been used to gain the data required. Both techniques have been chosen for a specific group of the respondents during the questionnaire survey. For the visitor’s respondent, the stratified random sampling was implemented but not for resident’s respondent. Further explanations of these selections are outlined in the following sections.

2.2.5.1 Sample Size

For determination of appropriate sample size for both groups of the respondent population, there were three sample size formulas reviewed. These were based on work from Krejcie and Morgan (1970), Cochran (1977), and Cohen (1988). Each of these authors have suggested a variety of statistical features to determine the sample size, especially for survey methods (Table 2.3).
Table 2.3: Characteristics of sample size estimations

<table>
<thead>
<tr>
<th>Authors</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| Krejcie and Morgan    | ▪ The authors have established the sample size formula according to the pre-determined target or accessible population (appendix 5.2).  
                          ▪ Provide identical sample size. The researcher has full control of sample size by change the t-value based on population size (in this case if whole population less than 120).  
                          ▪ Require population statistic to estimate sample size.  
                          ▪ There is no determination of statistical power and effect size. The authors have provided the fix alpha value of .05 and a degree of accuracy of .05.                                    |
| (1970)                |                                                                                                                                                                                                                |
| Cochran               | ▪ The authors have established the sample size formula based on margin of error (appendix 5.3).  
                          ▪ The author has established a formula by assuming the researcher need to accept an error item. For example, 5% margin error for categorical data and 3% margin error for continuous data. These errors are purposely determined as it was claimed that every measurement method could have an error. This is included the Type 1 error (α = .05).  
                          ▪ A total population Statistics not essential to use this formula. Even so, it require pre-determine types of methods will be used (eg. continuous or categorical data).  
                          ▪ Continuous data: experimental survey – with no distinct category label attached to specific data value. (i.e open-ended questionnaire)  
                          ▪ Categorical data: scale type survey (i.e closed ended questionnaire)                                                                                                                                       |
| (1977)                |                                                                                                                                                                                                                |
| Cohen                 | ▪ The sample size formula based on statistical power and effect size (appendix 5.4).  
                          ▪ Generally, this formula is appropriate for experimental research. For instance, determining the effectiveness of two variables.  
                          ▪ The formula is varied according to the statistical analysis methods. For example: by using independent sample t-test analysis – need to estimate effect size prior to research sampling method  
                          ▪ Comparison research: Pearson’s correlation: determination of effect size based on previous studies in the same variable that being investigated.                                                 |
| (1988)                |                                                                                                                                                                                                                |


Apparently, each of these formulas suggests a different size of sample population. The formulas suggested by Krejcie and Morgan (1970), Cochran (1977), and Cohen (1988) were examined to determine appropriate sample size for residents and visitors. However, in this study, a formula from Cohen (1988) was selected. In fact, other authors (e.g Johari, 2010; Ahmad Puad, 2005; Poria, 2001; Zainab, 1997) have been using Cohen’s formula especially in the field of tourism and management.

It is evident that Cohen’s formula is not only focused on the scale of the statistical test results and p Value (as most researchers are). There are other factors that could influence the
statistical results such as the effect of population size and the power of interpreting statistical data when at an advance level. In most research, significance testing was referred to as confidence interval estimation (Cohen, 1992). Most researchers have failed to consider the importance of the effect of size and statistical power in the preceding section. Considering all these factors as suggested by Cohen (1988) would lead to a more meaningful result than results that have been inferred from the observed p-value. Furthermore, since Cohen’s (1988) statistical power analysis was introduced, this analysis received little arguments or debates amongst methodologies, and supported by the availability of ample resources for estimating sample sizes in research designs using power analysis, this formula has achieved high reliability for determining an appropriate sample size (Chuan, 2006). Therefore, a software application called G*Power version 3.1.3 (Appendix 2.5) was used to formulate the sample size calculation (Faul, Erdfelder, Buchner and Lang 2009). The result shows that the recommended sample size for each survey is 305 respondents. Therefore, 710 respondents needed to be collected for two groups of respondents.

2.2.5.2 Probability Sampling Technique

Since the large sample was required for both respondents groups, a simple random sampling was chosen as appropriate for residents sample group. This is because the residents are in the ‘control’ area and are a well distributed population. Meanwhile, a stratified random sampling technique was employed for the visitor’s survey. It was deemed appropriate since this research involved a large number of visitors and the numbers of visitors were changing over time. A stratified random sample was obtained by dividing the sample group (number of visitors) into non-overlapping groups, called strata(s). A specific number of samples was chosen to represent each stratum. In this study, the strata were formed in a time frame feature in order to ensure the samples (visitors) have high probability to be selected as a respondents. The
visiting time frame was divided into four sets of times, which were on weekdays, weekends, school holidays and public holidays (Mohd Hafizal, 2008).

The total population from secondary data was obtained in the assumption that the number of visitors would be the same. In general, the size of the sample in each time frame was taken as a proportion to the actual size, so it’s called proportional allocation or quota sampling. Table 2.4 shows distribution of visitors in each time frame from April to May 2010. The data from specific months (April to May 2010) was used to estimate the number of visitors during the actual fieldwork (April to May 2011).

**Table 2.4: Breakdown of visitors’ population based on stratified sampling techniques**

<table>
<thead>
<tr>
<th>Months</th>
<th>Weekdays</th>
<th>Weekends</th>
<th>Public holidays</th>
<th>School holidays</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2010</td>
<td>5458</td>
<td>15596</td>
<td>7798</td>
<td>10139</td>
<td>38991</td>
</tr>
<tr>
<td>May 2010</td>
<td>17688</td>
<td>12282</td>
<td>17194</td>
<td>1964</td>
<td>49128</td>
</tr>
<tr>
<td>Total</td>
<td>23146</td>
<td>27878</td>
<td>24992</td>
<td>12103</td>
<td>88119</td>
</tr>
</tbody>
</table>

A total sample size (N=305) for visitor population was selected, and the number of visitors for each category was calculated to form a distribution percentage (Table 2.5). From the calculated percentage of each category, the number of visitors (sample size) was identified to be included in the survey.

It is important to note that the reason for using this technique was because the research anticipates the number of visitors’ arrival in Melaka WHS is different in terms of time frame. This suggests the greater possibility to get various profiles of respondents. For example, it
would enrich the data sample in terms of visitor’s motive, perceptions, attitudes, expectation of the visit.

**Table 2.5: Percentage for sampling technique based on specific time-frame**

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Sample size breakdown (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays</td>
<td>23146 / 88119 x 100% = 26.3%</td>
</tr>
<tr>
<td>Weekends</td>
<td>27878 / 88119 x 100% = 31.6%</td>
</tr>
<tr>
<td>School Holidays</td>
<td>24992 / 88119 x 100% = 28.4%</td>
</tr>
<tr>
<td>Public Holidays</td>
<td>12103 / 88119 x 100% = 13.7%</td>
</tr>
</tbody>
</table>

According to the table above, the numbers of respondents for weekday’s categories was 80 respondents (26.3%). For the weekend’s categories, 96 respondents (31.6%) are needed to represent the population and during the actual survey. The school holidays and public holidays are a challenging part to be categorized during the survey because it involves weekdays and weekends. Therefore, during the school holidays (87 respondents) and public holidays (42 respondents); the survey for respondents in the weekdays and weekends’ category was isolated to a whole week in order to fairly allocate the percentage of school holidays and public holiday’s to respondents.

**2.2.5.3 Non Probability Sampling Technique**

In this section, the data sample was obtained through interviews with residents and local government personnel. Since the interviews involved a small group of respondents, there was less complicated techniques to be used in order to disperse the data sample. Moreover, it is common to assume that each selected respondent has a chance to be included as a representative sample.
With regard to the research, main topic and general aim, the respondents (resident) were chosen randomly within a sample of the population. Although this technique was known as the most convenient and fastest way to obtain the information required; this technique is most likely sufficient in representing an accurate result for a homogenous population (local community). However, there is a concern that, in all probability it can create a bias in the results. This may be influenced by distribution of the sample representatives. For instance, due to multicultural residents within this society, each group of people (i.e ethnic group) may have different opinions. Therefore, it is necessary to have at least a simple survey strategy in order to balance the number surveyed among these groups.

Furthermore, a purposive sampling was used to obtain the data sample from local government personnel. This technique was used because it is important to find a respondent knowledgeable of the information desired. More importantly this is due to complex or technical discussion such as government policy, laws and administration structures that need to be understood by both researcher and respondents.

2.2.6 Questionnaires Design

The questionnaire design for this study encompasses two different sets of questionnaires. First, the resident questionnaire was designed to obtain the primary research aim and objectives regarding local community involvement in heritage management in Melaka World Heritage Site (see Appendix 2.6). Second, the questionnaire for visitors was like the resident’s questionnaire in terms of layout and design but some of the content was quite different. For example, in the demographic section, both respondents were solicited to fill in the requirement for gender, age, education levels, employment status, and ethnic group. However, the visitor’s questionnaire was designed to perceive information about their awareness and perceptions towards the
Melaka heritage trail in terms of their experience while using the trail. This is to identify the quality of experience that perceived by the visitor based on trail's infrastructure and the engagement from local resident (see Appendix 2.7). Meanwhile the questionnaire for residents emphasised their perceptions of the heritage trail towards social, economic and behavioural attribute. This information will be evaluated in order to find out whether there is a relationship between local community engagement and visitor expectation and satisfaction.

2.2.6.1 Resident Questionnaire

There are five main sections in this questionnaire:

A) Socio-demographic section

The first section consists of socio-demographic variables such as gender, residency status, age groups, level of education, occupation and household income indicators. The information regarding respondent demographic is essential as the research objective and hypothesis outlined to determine if there is a relationship between residents demographic background and place attachment towards heritage. Moreover, as the local community plays an important role as part of the heritage elements, demographic characteristics are necessary to reveal if any specific groups of people contribute differing views to the knowledge base of this research.

In general, gender is known to influence the residents’ attitudes, perceptions, satisfaction and behaviour (Dorwart, 2007; Jin, 2002; Poria; 2001). However, the gender variable should not be treated as a single entity, but other independent variables (i.e. age, employment status, education, etc.) are important in order to enrich the data towards significant findings. As such in Malaysian culture, females now played an important role in supporting and increasing the household’s income. Moreover, in some states in Malaysia (for example, State of Kelantan),
women are more dominant in the work position than men. Although its sound embarrassing for men, where the women has to work to support their family income has been seen acceptable in Malaysian culture (FOA, 2011).

Residential status is essential to investigate as the Melaka’s state government has introduced an ‘open market’ initiative to allow foreign investors to invest their business capital in to the city, yet, this city has been flooded with non local born residents. Some of them already have their own property within the city and the main motivation for their residency is tourism based business. In order to reject or confirm which assumption, an investigation was undertaken to determine whether there is a difference between local born residents and non local born residents in regard to participation in heritage conservation and preservation in Melaka. Besides, Besculides et al. (2002) suggests that social and economic factors could potentially influence residents’ perceptions and attitudes towards heritage management participation.

It is crucial to investigate the level of education among residents in order to find the correlation with a local community involvement phenomenon (Spennemann, 2006; Tosun and Timothy, 2003; Besculides et al., 2002). Although the education level is difficult to measure due to its connection with other dependent variables, such as age and employment status (Poria, 2001), in the context of this research, education is measured against the common education system in Malaysia. Meanwhile, as the resident’s age and employment status has been noted to contribute to the level of engagement in community participation (Poria, 2001), the influence of this information is affected the residents’ household income as well. However, respecting local cultural traditions, the residents are not being asked directly about their income, but via a series of polar questions (yes-no questions) designed and later estimated according to statistical figures from secondary sources (i.e Malaysian Economic Planning Unit).
Due to the main city’s unique character being surrounded with multiple ethnic groups and religious belief, the characteristic of ethnic groups within this society is important to comprehend. Moreover, as there are a variety of questions that can be asked to determine the residents’ style, additional information is required and considered important, such as marital status and number of family members, to evaluate their social economic income.

B) Heritage Trail Awareness Section

The second section is related to the residents’ awareness towards the Melaka Heritage Trail development within Melaka’s WHS zones. This section outlines the main concern regarding local community participation in determining the heritage trail experience. Therefore, the information regarding residents’ awareness is required to determine whether the local community has been involved during the initial stages of trail design and development. Preliminary data gathered from observation work in Phase 3 has contributed to the valuable information drawn on in formulating the heritage trail awareness questions, a series of questions developed to investigate residents’ knowledge in regard to heritage trail characteristics. For instance, a respondent was asked if they are aware, or knowledgeable about the background of the trail; such as when it was developed, why it was developed and who are the key stakeholders that have designed and developed the trail. In particular, the respondent is also asked if they know about the length of the trail, attractions along the trail, and if any element of the trail route represents their cultural and culture identity as a whole.

C) Perception Section

Third section comprises residents’ perceptions towards heritage trail development. The construct of the perception’s variable is designed according to three thematic concepts or
multiple item indicators. First, the perceptions are assessed through the impact of economic benefits. The economic impact assessment investigates whether the trail development has played a significant role or function to improve residents’ economic income. Secondly, an assessment of social impact investigates whether the trail design represents multi-cultural identities. Finally, a series of questions determine whether conflicts have occurred since the trail’s development. For example, as noted in the previous chapter (see Chapter Four: Community Involvement in Cultural Heritage Management) the existing local community involvement would be investigate to understand resident reaction toward tourism.

D) Place Attachment Section

In the fourth section, the residents were solicited to rate their agreement towards place attachment values. It is a key line of enquiry as to whether the local community has been involved throughout the heritage management process. Hence, in order to examine if there is a relationship between resident demographic profile and their engagement with local community involvement, this section is designed to clarify whether the place attachment values have influenced the local community involvement in heritage management by firsthand experience of the heritage trail.

The scale used to measure place attachment was based on Williams and Rogenbuck’s (1989) initial attempt to measure place attachment. The scale was developed to conceptualised two dimensions of place attachment attributes. These are place identity and place dependence (Williams and Vaske, 2003; Williams, 2000; Korpela, 1989; Proshansky et al., 1983). Apparently, these dimensions were designed to find out the connection between self and physical environment. In this research, the place attachment attributes were adopted via three sub-dimensions of conceptualisation namely: place identity, place affect and place dependence.
(Kyle et al., 2005; Jorgensen & Stedman, 2001). There are categories such as, local knowledge, emotional feelings, and behavioural reactions. Thus, the construct of place attachment’s attributes is based on three thematic concepts or multiple item indicators. First, the residents’ attachment is assessed through their knowledge about heritage elements or assets in Melaka. Moreover, questionnaires need to determine whether residents are capable of recognising individual characteristics of cultural heritage within the city, as this evidence would indicate their attachment values as well. Secondly, the residents attachment is gauged through emotional feelings; hence a series of statements relating to cultural and traditional values associated with individual residential groups was outlined, to investigate if emotional feelings were involved as part of the ethnic group’s attachment values. Finally, a behavioural intention concept is outlined to determine whether the residents’ attachment involves any particular intended action to represent their attachment to this place.

E) Local Community Involvement Section

In the final section, open-ended questions relating to the local community involvement were outlined as a follow-up approach after the survey sessions with residents. The rationale of this approach is to give a chance for residents to open up their thought in regard to their involvement in heritage management within the city. Moreover, a series of follow-up questions have been outlined by the researcher to ensure the discussion is within the topic range. The questions are mainly to investigate the opportunities and limitations of local community involvement in heritage management.
2.2.6.2 Visitor Questionnaire

There are three sections investigating the design of visitor questionnaire. These are:

A) Travel characteristics section

B) Trail Awareness Section

C) Perception Section

A) Travel Characteristics Section

This section has been designed to provide a visitation pattern among visitors. It is essential to investigate whether visitation patterns are associated with visitors’ perception towards the heritage trail experience. In particular, this section investigates the visitation patterns by measuring visitor’s frequency of visits, purpose of visit, travel motivations, number of group members, travel arrangement and type of accommodations. In consequence, it will profile the visitor in order to determine differing types of visitation patterns and how these influence the visitors’ experience while using the heritage trail in this city.

B) Trail Awareness Section

This section is particularly designed to determine a specific group of visitor that has awareness about the Melaka Heritage Trail. Awareness is known to be an essential component involved in the creation of attitudes, perception and behaviour (Baker, et al., 1994; Kotler, 1994; McClellan, 1998; Toward & Kerr, 1994). As noted in the previous chapter (see Section 4.9), there are several thematic heritage trails in this city. Hence, this section plays an importance role to ensure the respondents are referring to the ‘official’ heritage trail. Besides, investigating the visitors’ awareness of specific trails, visitors are required to indicate their favourite attractions along a trail by rating (ascending sequence numbers) according to list names provided. There are ten locations noted as major attractions along the Melaka heritage trail. For the purpose of
further analysis, this question is to determine the distribution of visitor preferences according to their rating score. In addition, it can evaluate how the visitors experience this trail in terms of their connection to specific places and how these have been rated in terms of major tourist attractions.

C) Perception Section

This section is the backbone of this questionnaire. The construction of the questionnaire is based for previous studies related to tourist’s perception in tourism development at heritage sites (Poria et al., 2009; Garrod et al., 2007; Kerstetter et al., 2001; McIntosh, 1999) and sustainable tourism (Moscardo, 1996). Visitors are required to rate their agreement in the perception statements according to three main concepts or multiple item indicators. These are: knowledge gained, emotional involvement and behavioural intentions. These concepts are related to the visitors’ experience while using the Melaka Heritage Trail. Therefore, each statement is specifically designed according to the character of the trail. In addition, some of the statements are designed to triangulate the connection between visitors’ trail experiences and contact with residents while using the trail. This is important in terms of how they enjoy the heritage elements and attractions along the trail, as contact with residents enhances the visitor’s experience as well. For example, a visitor may determine that they have enjoyed the journey over the trail route through experiencing the local culture by trying some of the local foods and beverages.

2.2.7 Data Analysis

Phase 4 consisted of synthesizing the data from the completed process in Phase 3. Data obtained from the surveys is analysed using the Statistical Package for the Social Sciences (SPSS for Windows version 18.0). Descriptive and inferential analyses such as frequencies
and percentages, cross-tabulations, t-tests, and ANOVA (F-ratio) were utilised. The levels of probability in the t-tests and F-ratio of immediate significance at the p < .05 Level was chosen as recommended by Hair et al. (2009) and Denscombe (2007). All these analyses were chosen to compare independent variables (demographics profiles such as gender, age groups, ethnic groups, etc.) and dependent variables (attitudes and perceptions).

In regard to the formulation of dependent variables, each attribute was designed to represent several concepts or multiple questions (from the questionnaire). In order to construct a multiple item question into a thematic research concept, the consistency of respondents’ agreement (based on Likert scale rating) was measured by using Statistical Package for the Social Science (SPSS) software. The reliability of several questions agreement was constructed by using the Cronbach’s Alpha test (reliability analysis). The value was determined by examining the multiple questions (internal consistency) that emerge from the designed concept. In addition, in order to perform a reliability analysis, at least three items or questions need to be combined (statistical calculation). The Cronbach’s Alpha value (number) normally ranges between 0 and 1. However, there is actually no lower limit value. The closer Cronbach’s alpha coefficient is to 1.0 the greater the internal consistency among the items or statements. George and Mallery (2003) provide the following rules of thumb: “α > 0.9 = Excellent, α > 0.8 = Good, α > 0.7 = Acceptable, α > 0.6 = Questionable, α > 0.5 = Poor, and α < 0.5 = Unacceptable” (p.231).
2.3 Conclusion

This chapter described the overall approach to the research and presented the strategy behind the research design, questionnaire development and sampling design. The research is exploratory in nature, mainly utilising a descriptive research design in data collection and analysis. Melaka World Heritage Site (WHS) was utilised as a case study, with specific focus on Melaka Heritage Trail within Melaka WHS. The main aim of the research: to explore the local community involvement in heritage management in Melaka World Heritage Site, Malaysia. In particular, residents’ attachment to the place was investigated, and evaluated against the residents’ perception and knowledge of the Melaka Heritage Trail, as a strategy to assess the involvement of the local community as a whole. Moreover, further information from both local government personnel and visitors was required to triangulate the findings associated to local community involvement.

A set of hypotheses were set up based on the seven objectives of the study. The procedures for analysing the hypotheses were based on the comparison on the rating of mean scores (t-tests), and analysis of variance (ANOVA) which examines the means of subgroups in the local communities. In the surveys, there were 305 usable questionnaires from both residents and visitors. In the interviews with the local community, a total of 60 respondents from residents within Melaka WHS Zones were involved; and eight officers from related local government departments were interviewed.