DEVELOPING ELECTRONIC PARTICIPATION FRAMEWORK FOR PUBLIC POLICY FORMULATION IN MALAYSIA

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Abstrak

Penyertaan elektronik (e-penyertaan) adalah domain penyelidikan yang memberi tumpuan kepada pembangunan teknologi maklumat dan komunikasi (ICT) untuk menyokong penyertaan dalam proses tadbir urus negara. Salah satu masalah dalam melaksanakan proses di Malaysia adalah kekurangan penyertaan rakyat dalam memberikan input yang akan digunakan dalam proses penggubalan dasar awam di negara ini. Di samping itu, terdapat kekurangan kajian tentang e-penyertaan dan rangka kerja yang menyokong penggubalan dasar awam.Oleh itu, dalam kajian ini, penyelidik cuba untuk melihat bagaimana rakyat boleh terlibat dan bagaimana mereka boleh memainkan peranan dalam proses merangka dasar-dasar awam di negara ini dengan menggunakan mekanisme teknologi maklumat. Objektif utama kajian ini adalah untuk membangunkan satu rangka kerja bagi pelaksanaan e-penyertaan dalam proses penggubalan dasar awam. Untuk mencapai objektif ini, tahap persepsi dan kepuasan rakyat berkaitan inisiatif e-penyertaan dalam penggubalan dasar awam dan proses pelaksanaan dikenal pasti. Soal selidik, temu bual, pemerhatian, dan analisis dokumen yang berkaitan merupakan kaedah yang digunakan dalam kajian ini. Teori Rangkaian Aktor (ANT) dari perspektif sosio-teknologi telah digunakan dalam kajian ini untuk menganalisis pembangunan rangka kerja e-penyertaan. Rangka kerja e-penyertaan yang dicadangkan akan dinilai menggunakan Kaedah Delphi untuk mendapatkan kata sepakat daripada pakar yang dilantik. Hasilnya, rangka kerja e-penyertaan untuk rakyat di Malaysia telah berjaya dibangunkan. Rangka kerja e-penyertaan ini membolehkan rakyat bersama-sama untuk menyumbang ke arah penggubalan dasar awam. Dari perspektif teori, rangka kerja menunjukkan bahawa ANT menyediakan asas yang kukuh untuk proses pembuatan dasar dengan menjajarkan sifat heterogen penyertaan awam. Dari segi amalannya, diharapkan penggunaan ICT akan membolehkan penyertaan daripada orang ramai dengan lebih meluas dan seterusnya menyumbang kepada amalan demokrasi.

Katakunci: Penyertaan rakyat, Penyertaan Elektronik, Dasar Awam, Teori Rangkaian Aktor (ANT), Kaedah Delphi

Abstract

Electronic participation (e-participation) is a research domain that focuses on the development of information and communication technology (ICT) to support participation in a nation's governance processes. One of the problems in implementing this process in Malaysia is the lack of participation from its citizens in providing inputs to be used in the nation's public policy formulation processes. In addition, there is a lack of research on e-participation and framework that supports the public policy formulation. Therefore, in this study, the researcher attempts to look at how the public can involve and play their part in the process of drafting the nation's public policies by utilizing the information technology mechanism. The main objective of this study is to develop a framework for the implementation of e-participation in the public policy formulation processes. To achieve this objective, the public's levels of perception and satisfaction with the current Government's e-participation initiatives in the public policy formulation and implementation process are identified. Questionnaires, interviews, observations, and analysis of relevant documents were the methods used in this study. Actor Network Theory (ANT) from the socio-technological perspective was applied in this study in order to analyze the development of the e-participation framework. The proposed e-participation framework was then assessed using the Delphi Method to seek the consensus from the experts appointed. As a result, the e-participation framework for public participation in Malaysia was successfully developed. This e-participation framework enables people to jointly contribute towards the formulation of public policy. From the theoretical perspective, the framework implies that ANT provides a strong foundation for policy making process of aligning the heterogeneous nature of public participation. In practice, the ICT tools for public participation will hopefully enable a wider participation in contributing to a democratic practice.

Keywords: Citizen participation, Electronic participation, Public policy, Actor Network Theory (ANT), Delphi Method

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Glossary of Term

Actor Network Theory: treats entity and materiality as enacted and relational effect and explores the configuration and reconfiguration of those relations.

Delphi Method: to search consensus-building by using a series of questionnaires produced through multiple iterations from the collected data provided by selected subjects.

E-consultation: citizen provides feedback to government; to contribute their views and opinion.

E-decision making: a relation based on partnership with government and citizens actively engage to the policy making process.

E-government: the use of ICTs to exchange information and services with citizens, businesses, general public and government agencies to achieve better government.

E-information: government produces and delivers information for use by citizen.

E-participation: interaction to government that emphasises on the role of ICT to enlarge the space for discussion and inclusion of opinions of stakeholders into government process.

Formative Research Methodology: used to develop and improve the instructional design theories or model.

Grounded theory analysis: method that uses a systematic set of procedures to develop an inductively derived theory about a phenomenon.

Public policy: related to public interest since it somehow affected all actors and it is in relation to the government objective.

Public policy formulation: efforts of the government in addressing issues affecting the public.

List of Abbreviations

ANT	Actor Network Theory
CG	Community Group
EG	Electronic Government
EPU	Economic Planning Unit
FRM	Formative Research Methodology
GTP	Government Transformation Programme
G2C	Government-to-Citizen
G2B	Government-to-Business
G2G	Government-to-Government
ICT	Information Communication and Technology
ICU	Implementation Coordination Unit
INTAN	Institut Tadbiran Awam Negara
IAGPs	Inter-Agency Planning Groups
MAMPU	Malaysian Administrative Modernisation and Management Planning Unit
MDC	Multimedia Development Corporation
MSC	Multimedia Super Corridor
NDC	National Development Council
NDPC	National Development Planning Committee
NEC	National Economic Council
NEP	New Economy Policy
NGO	Non-Government Organization
NKRA	National Key Result Areas
NSC	National Security Council
OECD	Organization for Economic Co-operation and Development
OPP	Obligatory Passage Point
OPPs	Outline Perspective Plans
PEMANDU	Performance Management & Delivery Unit
SG	Spokesperson Group
TG	Technical Group
TWGs	Technical Working Groups

CHAPTER ONE
INTRODUCTION

1.1 Background

Information and Communication Technology (ICT) have revolutionised human life in myriad ways. The impacts of ICT developments are clearly seen in many areas. For instance, the Government uses ICT to modernise its governance processes. ICT is the most powerful and suitable tool to improve the effectiveness and efficiencies of governance processes as well as to reduce the costs of human errors.

Taking advantage from the rapid expansion of ICT, in l996, Malaysia launched the Multimedia Super Corridor (MSC) to accelerate its entry into the information age. Putrajaya is the new federal administrative capital where the concept of Electronic Government (EG) was introduced. As one of the seven MSC flagships, EG aims to reinvent the perception of Malaysian public and private sectors towards the public sector. Simultaneously, vital information processed within the Government is streamlined. EG initiatives have already utilised new ICT technologies to decrease administrative costs and improve service delivery to public (Commission of the European Communities, 2003). This remarkable innovation is mainly focused on solving everyday problems faced by the public in dealing with Government agencies.

Numerous nations around the world spend a large amount of money to implement ICT technology for the effectiveness of its governance process. Many evidences have clearly shown the effectiveness of EG implementation in delivering high quality standards of information and services in the public and private sectors as well as increasing the efficiency of management systems in the private sectors.

Different subjects related to EG and the roles played by the Government in order to digitalise the governance processes have been discussed. It is undeniable that Malaysia's EG is a platform to deliver information and services to its public. However, the public' participation concept in EG or usually known as e-participation is abandoned (Suh, 2005; Betancourt, 2005; Sokolova, 2006; Ulziikhutag and Sukhbaatar, 2006).

In assessing the effectiveness of EG, some fundamental factors should be considered namely accountability, transparency, and openness (Information Society Commission, 2003). These three fundamental factors will be affecting the e-participation (Information Society Commission, 2003). In this sense, the EG initiative may create space and mechanisms in encouraging people to participate transparently. Thus, it will allow its intended consumers to actively play their roles in public policy formulation. Apart from that, e-participation will allow public to share their ideas, opinions or any valuable inputs to the Government in the decision making process.

By systematically implementing the e-participation process in EG, the general public are directly involved in Government's decision making process. This view is supported by Squires (2002) who stated that quality must be public-centred because public services have a different relationship with their 'customers' based on the democratic context within which these services are to be provided. Therefore, opinions, ideas or information provided by the public would assist the Government to make decisions in creating or updating an act, policy or plan that involves public's interest. As stressed by the International Association for Public Participation (2007), e-participation is "*any process that involves the public in problem solving or decision*

making and uses public input to make better decision". According to a UN report in 2005;

> *Promoting participation of the public is the cornerstone of socially inclusive governance. The goal of e-participation initiatives should be to improve the public's access to information and public services; and promote participation in public decision making which impact the well being of society, in general, and the individual, in particular. E-participation is the sum total of both the government programs to encourage participation from the public and the willingness of the public to do so. It encompasses both the demand the supply side.*

> (United Nations, 2005, p.19).

Various e-participation projects have attempted to create public-based groups through online forums, virtual discussion rooms, electronic juries or electronic polls (OECD, 2003a). Although such projects received supports from the Government, these projects have limited impacts and have not yet led to clearly defined e-participation approach or framework. In the European Union, for instance, a current document on public participation proposed that all EG strategies should promote online public participation (Commission of the European Communities, 2003).

In general, three EG players were identified: Government public administrators, the general public, and related interest groups. However, these individuals and interest groups do not automatically have the "priority" to formulate a public policy. This scenario then contributes to the mushrooming of blogs created by unsatisfied public

and politicians to discuss their ideas and opinions to either support or reject the current public policy formulation. These blogs, which are supported by many, are usually able to gain policymakers' attention. Some even use the mass media to express their feelings and recently this mode seems to be quite effective to "wake the Government up".

1.2 Problem Statement

Many Government agencies in the developing countries have tried to deliver government services to their public through ICT mechanisms known as EG. These EG websites are mostly focusing on publishing information and providing links to other Governmental sites'. Pardo (2000) stated that one of the functions in e-government is public participation. This statement is supported by a number of scholars such as Tamarah and Amer (2010) who separated the development of e-government into six stages which include citizens' participation in government.

E-government definition gap

Malaysian Government has set a goal for the success of EG implementation. That goal is to improve the convenience, accessibility, and quality of interaction with public and businesses; simultaneously, to improve the speed and quality of policy, co-ordination and enforcement as well as the information processed within the Government (MAMPU, 1997a).Malaysian e-government initiatives have been launched to improve the internal operations of the government and provide better services to the people of Malaysia. This initiative aims to increase the convenience, accessibility and effectiveness of Government's interaction with people and businesses. The government has established myGovernment portal

(http://www.gov.my) since 2003 as the government's initiative in improving its service delivery.

To date, they still do not fulfil the requirements of a true e-government concept as proposed by the UN and many scholars in this area (e.g. Pardo, 2000; Tamarah & Amer, 2010) where people's participation in public policy decision making is a necessity. Currently, the available e-government applications are not intended to cater the involvement of public's participation in formulating public policy. Public participation as required by the UN and scholars is more on policy formulation decision making. This situation is not consistent with the concept of e-government proposed by the UN.

As stated in the UN Global E-Readiness Reports 2005, the following definition and concept of e-government has been adopted: "*(E-government is) the use of ICT and its application by the government for the provision of information and services to people. The aim of EG, therefore, is to provide efficient government management of information to the public; better service delivery to public; and empowerment of the people through access to information and participation in public policy decision-making*" (United Nation, 2005, p.14). From this definition, it is stated clearly that e-government should take into account the public participation in the political decision making process, an element that is still missing in Malaysian e-government initiative.

Based on that, there is a clear gap in the EG implementation process in Malaysia involving the Government and the people. In the context of this research, the gap refers to the communication gap that still exists between the decision maker

(Government) and the general public. This communication gap relates to the participation between people and government public policy formulation. Hence, it is imperative to bridge this gap by creating a mechanism to enable peoples' participation in public policy formulation to fully fulfil the purpose of EG.

Certain aspects related to participation and involvement of people in policy or decision-making process has caused intense debate. This issue is more complex when we put it in the context of political, economic and social development of a democratic country like Malaysia.

Using ICT to enabling citizen participation

The concepts of EG and e-participation relate to the use of ICT by the public to participate in government's decision making process. According to Pardo (2000) and Tamarah and Amer (2010), public participation element is essential to an e-government. There are many definitions of e-participation discussed by the researchers and experts in the field. Most of them agreed to the general definition that defines e-participation as a sum total of both the government programs to encourage participation from the public. This participation uses ICT to offer the opportunity to people as a whole to interact with the government using different electronic media. Specifically, e-participation can be viewed as providing participation process via electronic communication at all levels of government, public and business community.

Accordingly, one of the important challenges for the success of e-participation is to find out ways of integrating ICT into communities (social) that can strengthen social

inclusion and bridge the gap of social and technical divides. An approach in exploring the task of ICT in the delivery of e-participation initiative is to turn to the traditional "social shaping" approach (MacKenzie & Wajcman, 1999). ICT may act as part of technology that presents clear benefits to Governments or the public (Burn & Robins, 2003; Navarra & Cornford, 2012). Social shaping supports the idea that socio-technical setting is appropriate for analysing e-participation.

Taylor (2004) noted that e-participation initiatives does not improve on cost savings and does not improve social inclusion, innovation or participation. These findings reflect the e-participation initiatives where the efficiency benefits from the consistency of processes must be balanced against local knowledge (constituent public) and expertise (Ellingsen et al., 2007). These two important factors need to be properly planned and implemented when integrating ICT into government business processes.

Socio-technical perspective

Several studies describe the framework for e-participation (Rifkin et al., 1988; Macintosh, 2004; Tambouris et al., 2007; Phang and Kankanhalli, 2008; Islam, 2008). However, their frameworks focused more on specific conditions or environments. Spidergram's framework (Rifkin et al., 1988) tries to understand participation as a process and assesses the changes and progress of the program over time. This framework focused on the medical environment. Meanwhile, a five-stage top-down and bottom-up e-participation framework developed by Tambouris et al. (2007) concentrated on the stages of the e-participation starting from the Democratic Process (Top) of a country until Technologies (Down). This framework is suitable for

democratic developed countries where the role of ICT is just as a supportive mechanism. However, this framework is highly dependent on the political structure of a country and it may not be suitable for countries which do not practise democratic political system.

A framework of ICT exploitation for e-Participation as proposed by Phang and Kankanhalli (2008) fits the appropriate e-participation techniques with ICT tools to reach the objective. Nevertheless, this framework does not highlight the socio-economic issues involved in setting up any e-participation objectives. This socio-economic issue has been addressed by 7Ps Sustainable E-participation implementation model proposed by Islam (2008). The model discusses socio-economic settings and tools to bridge the existing gap in Phang and Kankanhalli's (2008) framework. However, 7Ps Sustainable E-participation framework does not highlight the matter from the socio-technical perspective. This perspective gives the researcher an idea to investigate in depth in developing an e-participation framework.

Therefore, understanding the tools and implementation of ICT in e-participation requires critical attention in socio-technical settings. Rhodes (2004) noted that there are several ways to implement a technology. Firstly, technological determinism views where technological implementation is viewed as a different entity from and outside the society. Secondly, technological constructivism views where technology is created by socio view and implemented in itself. Thirdly, the socio-technical view that links social and technical perspectives together, but still treats them as separate entities from each other. However, McMaster, Vidgen and Wastell (1998) argue that none of the approaches offers adequate opportunities for a true socio-technical understanding

symmetrically but they treat technology and society asymmetrically. This means that an acceptable approach of technology or information system implementation is through a symmetrical approach of technology and society.

To model an e-participation framework in socio-technical perspective, the researcher used the Actor Network Theory (ANT). Actor Network Theory (ANT) is an alternative framework that suggests a socio-technical view in which neither social nor technical position is preferred. ANT deals with the socio-technical aspects by denying that purely technical or purely social relations are possible, and considers the world to be full of hybrid entities (Latour, 1993) containing both human and non-human elements. Generally, ANT is developed around problems associated with attempts to handle socio-technical problems (Latour, 1993). By using this theory, the researcher came out with a new e-participation framework based on socio-technical perspective.

In this research, the researcher applied e-participation concept in Malaysia's public policy formulation process as the domain of research. Until now, there is a sacarcity of research on e-participation concept in public policy formulation in Malaysia. However, there are some case studies being reviewed in other countries. The cases include e-participation in the Israeli local Governments (Nachmias & Rotem, 2005), citizens' participation and policy making in Singapore (Leong, 2000), and a case study on citizens' participation in South Africa (Andrews, 2005). Several countries have implemented e-participation concept such as United Kingdom, Sweden, Estonia and Australia. By analysing the above-mentioned studies, it is found that each idea is based on residual political environment. In other words, every country has different political structure and philosophy.

In the researcher's study context, Malaysia has its own political democracy environment running within three major races; Malay/Bumiputera, Chinese, and Indian. The Malaysian government should consider this matter carefully and in entirety. In the country, the e-participation concept still needs to be further studied to solve issues and problems arising from its implementation.

Due to this, the researcher proposed an e-participation framework that will suit with the public policy formulation. Due to the immaturity of the e-participation field in the country, the researcher decided to identify the requirements for an e-participation framework. The researcher believes that as the e-participation domain matures; this framework can be further applied to be implemented to all parts of government decision making.

Therefore, an appropriate e-participation framework should be developed to cater for the participation of public in policy formulation. Based on this e-participation framework, it can assist the government to involve people in public policy formulation. So, the issue of low level of e-participation as mentioned earlier could be reduced to a minimum level.

1.3 Research Questions

This research attempts to address the issues related to the lack of citizen's e-participation in the country's public policy formulation process. However, due to some research constraints, students of the institutes of higher learning, who are subset of Malaysian citizens, are selected for this research. In addressing these issues, the following research questions were proposed:

- What are the students' perceptions of their participation in public policy formulation?

- Are the students satisfied with the current e-participation system implemented by the government?

- What are the requirements for an e-participation framework?

Based on that, the main research question is as follows:

- How can the current processes of public policy formulation be enhanced through the e-participation approach?

1.4 Research Objective

The main objective of the research is to propose a framework to implement e-participation in public policy formulation processes. To achieve this, the following sub objectives have been formulated:

1. To obtain students' perceptions on public policy formulation as carried out by the Government in terms of e-participation.

2. To measure students' satisfaction with the current e-participation implementation employed by the Government.

3. To identify the requirements for an e-participation framework.

4. To develop a framework for implementing e-participation for public policy formulation processes.

1.5 Significance of the study

As ICT is rapidly progressing worldwide, the process of finding and receiving information are becoming easier. The Malaysian Government through MSC flagships has came up with an EG initiative that created an electronic arch to deliver better

information and services to the public. Therefore, the outcomes of this research will provide a deeper understanding on e-participation to both Government and public. This research may bridge the gap between public and the Government in terms of communication too.

In addition, the e-participation framework will involve the public's participation in the governance process. With the increase of Malaysian public working in various professional areas, their opinions, ideas, and suggestions can definitely contribute to a more efficient governance process. Indirectly, e-participation may lead to an improved decision making process.

Moreover, the e-participation mechanism in public policy formulation through Malaysia's EG can be enhanced, which in turn, will benefit all related parties. By involving the public in decision making process, the level of public's satisfaction can be increased. Satisfied public will yield efficient Government. Public's opinions, ideas, and suggestions can be the added value to the decision making process of the Malaysian Government. From the significance of this study, it shows that a lot of benefits can be reaped by the Government from this development.

Moreover, the Government should recognise the importance and relevance of the general public's ideas, opinions or suggestions about public policy formulation processes. The conventional modes of communication and information gathering mechanisms make it difficult to enable the public to participate. Since public policy formulation is a sensitive issue, the Government must revise the current framework of public policy formulation in order to enhance the public's participation in decision

making process via the EG initiative. With democracy as the underlying principle, public's participation in governance process is necessary.

Despite the growing number of case studies, e-participation remains a relatively new concept and little is known about the different aspects of e-participation framework. This study aims to create a better understanding on e-participation design in Malaysian public policy formulation process. By observing and analysing previous e-participation frameworks and case studies on public policy formulation, the researcher aims to produce an enhanced version of public policy formulation for the e-participation concept through the EG initiative in Malaysia.

1.6 Scopes of Study

Scopes of this study are as the follows:

a) Overall, there are some criteria that need to be given attention by the stakeholders in this research. There are three user groups of EG: Government-to-citizen (G2C), Government-to-business (G2B), and Government-to-Government (G2G). However, this study focused on public's view that can be linked to public policy formulation processes.

b) This study focused on the current practice of public policy formulation of the Malaysian Government.

c) There are many types of political systems. This study was conducted in parliamentary democracy political system as practiced in Malaysia.

d) The proposed framework will be evaluated by using Delphi Method to obtain consensus from the experts.

e) The framework component of e-participation will be focusing more on the planning phase of public policy formulation processes.

f) Respondents of this research comprised of students from public Institute of Higher learning (IHL). They were given questionnaires to answer.

1.7 Structure of Thesis

The chapters of this thesis are derived by the researcher from the process that was carried out to achieve the objective of this thesis. The remainder of the thesis is organized as the following:

- *Chapter 2: literature review.* This chapter provides the literature and overview of the concept of democracy, public participation and e-participation. The researcher also comes out with a theoretical framework based on those three concepts above. E-government and its relationship with e-participation will also be discussed. Existing e-participation frameworks proposed by other researchers are also presented in this chapter.

- *Chapter 3: Methodology.* This chapter presents the approach/method and tools used by the researcher in this study. The research model was proposed as a guideline to meet the study's objectives.

- *Chapter 4: Students' perception towards participation in public policy formulation process.* This chapter discussed the first objective, which is to study the students' perception towards participation in public policy formulation in Malaysia. The researcher had to get feedbacks and perceptions from the respondents on e-participation in order to form a suitable framework in this subject.

- *Chapter 5: The requirement for e-participation framework*. This chapter presents the requirement needed to develop an e-participation framework. In this chapter, the researcher explores thee-participation approach and discusses on the main component of the said framework.

- *Chapter 6: Proposed participation framework in Malaysian public policy formulation using Actor Network Theory*. This chapter presents an e-participation framework to manage public policy formulation. The study embraces socio-technical research paradigm and uses Actor Network Theory (ANT) as the theoretical foundation with which to explore the mutual interaction between people and ICT. The discussions also include the resulting e-participation framework as proposed by the study and evaluated using the Delphi Method.

- *Chapter 7: Summary, Contribution, Discussion, Recommendation and Conclusion*. The concluding chapter provides a summary of contributions and future research challenges.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Several central concepts have been identified in the top-down approach of democracy sustainability. From the top-down approach, democracy is recognised as an important determinant of sustainability. Democracy helps to identify the real causes of sustainability problems. Additionally, the relationship between public participation with democracy is highly influenced by the environment.
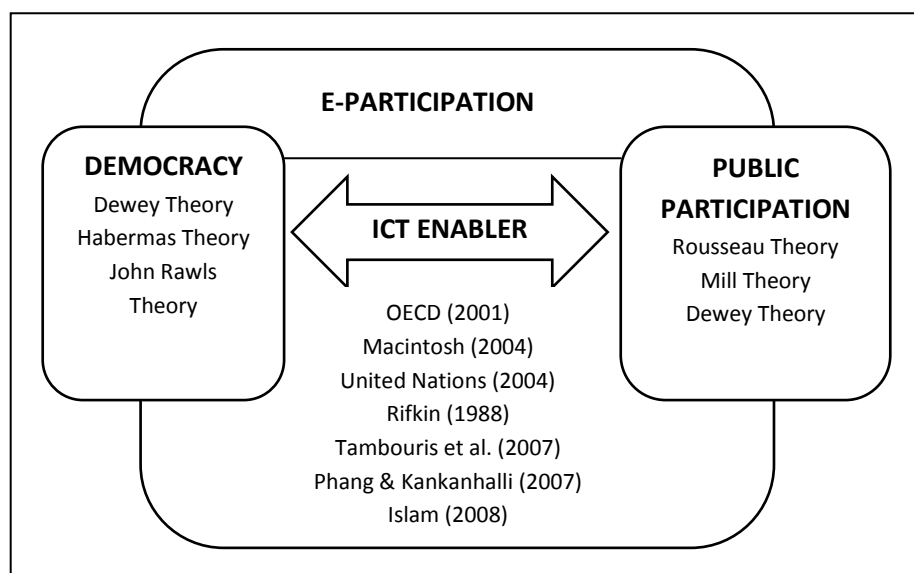
Figure 2.1. Theoretical framework

Figure 2.1 shows the identified links between democracy and public participation. The researcher posited the notion that in order to improve sustainability in democracy, the public need to acquire new insights of democracy. The theory of public participation is derived from the theory of democracy. Based on the figure above, the researcher posits the notion of public participation being the key element to improve sustainability in democracy. This research promotes the Information and Communication Technology (ICT) as an enabler for public participation in a

democratic system. Previous researcher (Macintosh, 2004; Rifkin, 1988; Tambouris et al.,2007; Phang and Kankanhalli, 2007; and Islam, 2008) and certain organizations (OECD, 2001; and United Nations, 2004) have worked it in this field using ICT for public participation. Their work will further discussed in Section 2.4, Section 2.5.1, and Section 2.6.
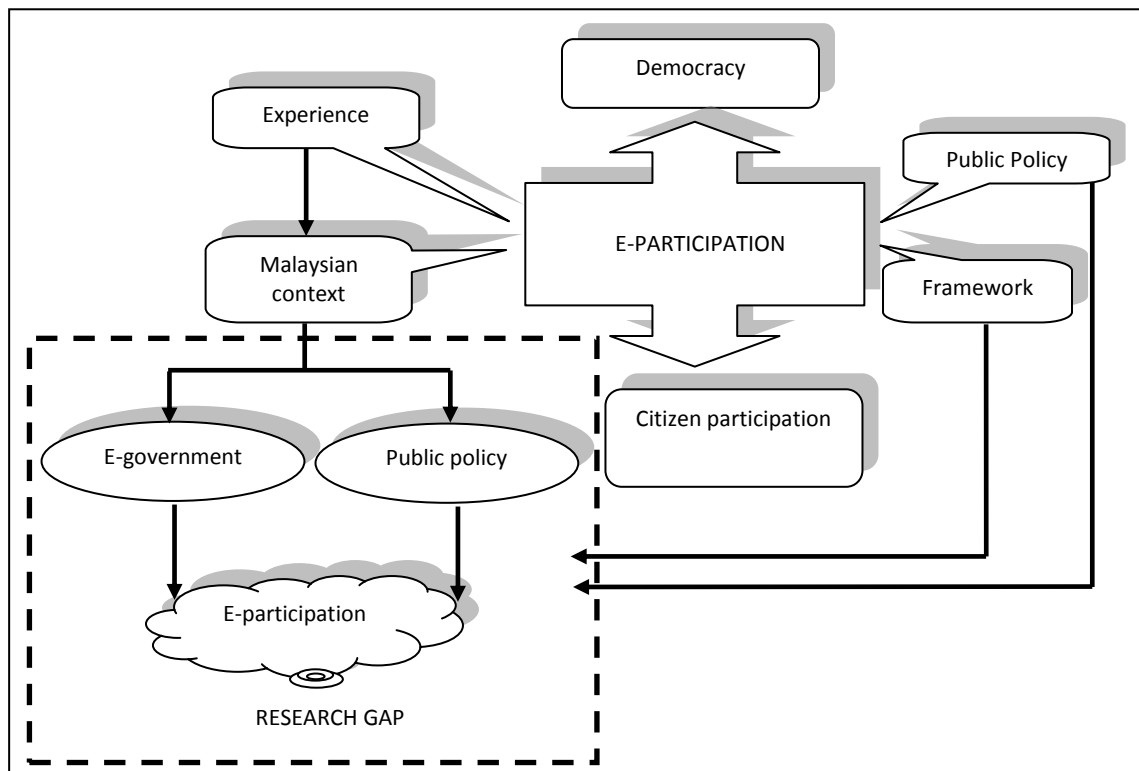
Figure 2.2. Structure of literature review and its link to the study

Figure 2.2 shows the overview of the study's literature review structure and their linkages. This chapter is divided into three sections. First section is about electronic government (EG) and public participation. This section explains about public participation, its history, theoretical perspective as well as its basis in the planning process. The second section describes about e-participation, currently available frameworks, rationale of EG, public policy formulation, and several examples of e-

participation models in other countries. The third section explains about Malaysia's EG and public policy formulation in general.

2.2 Electronic Government (EG)

EG has the potential to transform interaction modes used by the government to interact with the public and businesses using new ways. EG affects everyone since the role of Government is all-encompassing and very complex. The researcher comes out with three rationales on why Government should firmly impose its commitment to implement EG. First, expectations of the public for government services are rising due to the improved services accorded by the business sector. The public demand improved services from the Government and wonder why the Government cannot employ ICT and multimedia technologies the same way as the business sector. Second, implementing EG may reduce costs and expenses for the Government in the long run. Third, EG may lead to the growth of a business sector through its many network effects. For example, the business sector can leverage on an efficient EG, thus making it more competitive, efficient and productive.

Generally, perspective on EG can be divided into major applications of fields of study. However, these fields of study depend on the studies conducted by related researchers of EG from time to time. Presently, the researcher has identified four main fields of study in EG as presented in Figure 2.3 below.
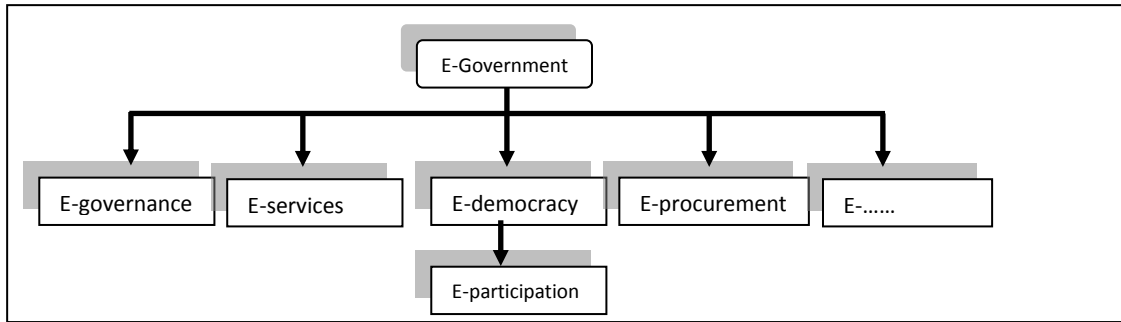
Figure 2.3. Field of studies in EG

In this study, the researcher gave extra attention on e-democracy niche (e-participation) area as the field that needs to be studied in the Malaysian environment. Based on the researcher's view, there are areas that need to be thoroughly studied as previously stated in the problem statement; Malaysia's EG in general does not really concentrate on obtaining public participation to assist the Government in decision making process. In this context, public participation need to be encouraged and accepted in public policy making process.

2.3 Relationship of E-government, E-governance, and E-participation

Utilization of ICT to improve the quality of governance process have been discussed and converted into practice. It has been done under various terms such as e-government, e-governance, and e-participation. These terminologies often refer to various possibilities of electronic forms to serve as an alternative instrument to change outdated manual processes to modern online processes in many ways. Such changes always relate to activities within the public administration system itself or/and external relationships between public and more or less integrated back-offices of a single administrative authority or various public administration institutions (Špaček, 2008).

According to Rahman (2007), EG refers to the government's use of information technologies to exchange information and services with public, businesses, general public, and government agencies. Meanwhile, according to West (2004), EG is the delivery of government information and services online through the internet or other digital means. US 2002 E-Government Act, as described by Grö nlund and Horan (2004), defined EG as "*the use by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to a) enhance the access to and delivery of Government information and services to the public, other agencies, and other Government entities or b) bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation*".

In a broader perspective, EG can be defined as the utilisation of information technology to improve the access to and delivery of government services to benefit all EG stakeholders (Deloitte & Touche, 2003). Some researchers referred EG as the use of information technologies and it is able to transform interaction with public, businesses, and the Government. EG involves the computerisation of paper-based procedures that will prompt new styles of management, transacting business, listening to public, and delivering information (Okot-Uma, 2002). These technologies can serve many ends: enhanced delivery of services, improved interactions, public empowerment through access to information, and more efficient management. Consequently, EG aims to get better access to and delivery of government services and to drive towards efficient governance, less corruption and improved transparency,

greater convenience, revenue growth, and/or cost reductions to better manage a country.

Forman in Barr (2001) defined e-government as "the use of Internet technology and protocols to transform agency effectiveness, efficiency, and service quality". The Gartner Group, a leading private technology research company, provides a more dynamic, process-oriented definition of e-government as "the continuous optimisation of service delivery, constituency participation and governance transforming internal and external relationships through technology, the Internet, and new media". Detlor and Finn (2002) defined EG as "the delivery and administration of government products and services over an IT infrastructure".

According to Grönlund and Horan (2004), some definitions are more about governance than Government. EG actually refers to what is happening within government organisations. On the other hand, e-governance refers to the whole system involved in managing a society. The system includes activities not only run by government organisations, but also companies (private sector) and the general public.

To close this definition gap, Riley (2004) mentioned that Government's task is to focus on achieving the public interest, while governance is a way to describe the links between Government and its broader environment such as political, social and administrative. The comparison between Government and governance by Riley (2004) is presented in Table 2.l.

Table 2.1

Comparison between Government and Governance

GOVERNMENT	GOVERNANCE
Superstructure	Functionality
Decisions	Processes
Rules	Goals
Implementation	Coordination
Outputs	Outcomes
E-Government	E-Governance
Electronic service delivery	Electronic consultation
Electronic workflow	Electronic controllership
Electronic voting	Electronic engagement
Electronic productivity	Networked societal guidance

Source: Adopted from Riley (2004)

Due to that, Grö nlund and Horan (2004) defined EG as the use of information and communication technologies by the Government. The platform possesses the ability to transform the relationships between the Government and its relations such as public, businesses, and government agencies to improve the interactions with business and industry as well as public empowerment through access to information. The benefits include less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

Another two definitions that illustrate this idea are from OECD (2003a) that defined EG as the use of ICT, and particularly the Internet, as a tool to achieve better

Government. Commission of the European Communities (2003) defined EG as the use of ICT in public administrations combined with organisational change and new skills in order to improve public services and democratic processes. From the definition mentioned above, EG refers to functions enabled by the Internet and World Wide Web (WWW) in general.

In this idea, EG may be recognised as the opening phase of 'an electronics' era that focuses on one-way interaction (to give an information), followed by e-governance and e-participation. Sakowicz (2004) argued on the narrow approach to e-government that may lead to transforming bureaucracy into 'infocracy'. Based on OECD's broad definition about e-government, the definition consists of participatory aspect, which stresses on the instrumental character of ICT and requirements of innovative solution.

Wimmer and Bicking (2006) stated that there are four areas of study in the context of EG. They are society evolution research, ICT-related research, Government modernisation research, and research in values of Government innovation based on ICT including public value in e-participation environments. These four main areas cannot be separately considered. For instance, the success of e-participation implementation depends on how Government uses ICT to promote public participation. The e-government acts as a research field to integrate diverse disciplines in the exploration of innovation and solutions. It investigates and proposes a model of public agency as well as redefining the execution of public policy under innovative ICT technology.

Through Internet delivery systems, the criteria are non-hierarchical, non-linear, two-way communication, and available 24 hours a day, seven days a week (West, 2005). Non-hierarchical and non-linear characteristics enable users to seek information based on their own convenience, instead of during office hours only. By facilitating two-way communication, EG has been hailed as a way to improve service delivery and responsiveness to users (Markoff, 2000).Therefore, the Malaysian Government should increase its interaction with the public to ensure that the public opinions are heard in the process of developing the nation. According to the EG vision, one-way interaction prevents the public from getting involved in government processes.

E-participation concept in the EG initiative is meant to assist the Government in public policy formulation. Approach to e-participation should be considered by the Government to create two-way interaction. Apart from that, e-participation initiative may increase the use of EG. By implementing e-participation, it will bring benefits to all walks of life, whether urban, rural, rich, poor, young, old, those familiar with IT, and those who are not. Interaction with the Government will become much easier and convenient too.

2.4 Democracy

Among political terms, "democracy" has been applied to representative institutions. Since this research closely deals with public participation in the democratic processes, the word "democracy" ought to be defined and described accordingly. Most of the definitions of democracy are linked to democracy with elections or voting. Schumpeter (1947) stated that democracy is the institution that "organises for arriving at political decision in which individuals acquire the power to decide by means of a

competitive struggle for the people's vote". Dahl (1971) defined democracy as "regimes that have been substantially popularised and liberalised, that is, highly inclusive and extensively open to public contest". This definition is supported by Przeworski and limongi (1997) who described democracy as "a regime in which some governmental offices are filled as a consequence of contest election".

However, Sartori (1987) defined establisheddemocracy as a system of governance that is organized to give effect to the values embedded in the tradition of liberal political thought that gave rise to the democratic transformations. Despite the different forms of definitions stated, all contemporary liberal-democracies are committed to the ideals of freedom, equality, and justice that have been formed in the evolution of that tradition. Sometimes, democracy is also termed as "liberal democracy," and sometimes only "democracy". Nevertheless, all the important definitions of democracy involve free election or voting. Powell (1982) added that the rule of majority is an important element of democracy.

According to the Dewey's theory, democracy is the most desirable form of Government because it alone provides the kinds of freedom necessary for individual self-development and growth. The freedom to exchange ideas and opinions with others, the freedom to form associations with others to pursue common goals, and the freedom to determine and pursue one's own conception of the good life are also included. The theory remarked that democracy is also a "mode of associated life" in which public cooperate with each other to solve their common problems with respect and kindness.

Habermas (1970) stated that in democracy, "participants (the public) would be able to evaluate each other's statement solely on the basis of reason and evidence in an atmosphere completely free of any non-rational "coercive" influences, including both "physical and psychological coercion", or what he called as "ideal speech situation". The public would be motivated solely by the desire to obtain a rational consensus, and no time limits on the discussion would be imposed. Although it is practically difficult, the ideal speech situation can be used as a model of free and open public discussion to evaluate the practices and institutions through which large political questions and issues of public policy are decided in actual democracy.

John Rawls's Theory of Justice attempted to develop a justification of a democratic political order characterised by fairness, equality, and individual rights. He imagined that reason and self-interest would guide a group of people to adopt principles such as the following: (1) everyone should have a maximum and equal degree of liberty, including all the liberties traditionally associated with democracy; (2) everyone should have an equal opportunity to seek offices and positions that offer greater rewards of wealth, power, status, or other social goods; and (3) the distribution of wealth in society should be such that those who are least well-off are better off than they would be under any other distribution, whether equal or unequal. These principles amount to a democratic institution.

Democracy falls into two basic categories, direct and representation as stated in Figure 2.4. In direct democracy, all public, without the intermediary of elected or appointed officials, can participate in making public decisions. Such system is clearly only practical with relatively small numbers of people. However, in representative

democracy, public will elect officials to make political decisions, formulate laws, and administer programs for the public good.
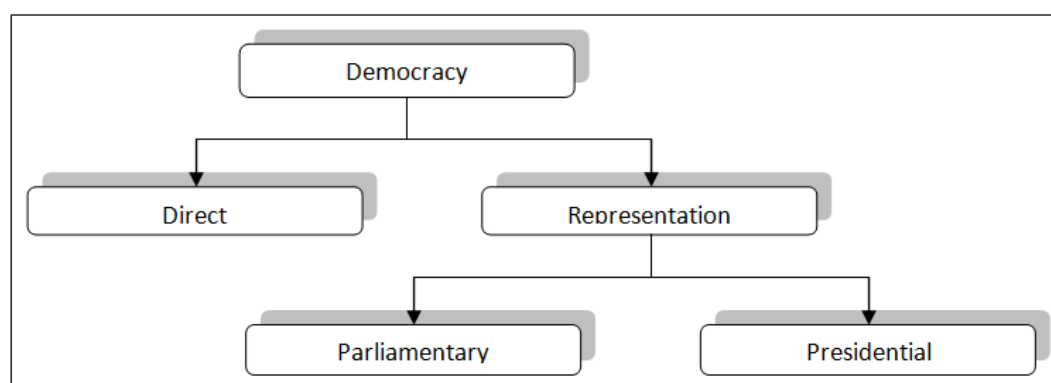
Figure 2.4. Types of democracy

All approaches in democracy are systems in which public freely make political decisions by majority rule. However, decision made by the majority is not necessarily democratic. In a democratic society, majority rule must be coupled with guarantees of individual human rights that, in turn, serve to protect the rights of minorities. The rights of minorities are protected by the Government because democratic laws and institutions protect the rights of all public. The Government is only one element simultaneous in a social fabric of many and varied institutions, political parties, organizations, and associations. Government can deliberate on public issues in a systematic manner that requires public participation to make decision.

2.5 Public Participation

The term public participation has emerged to be popularly used in the past several decades. Public participation has been discussed at length, especially in the field of political sciences and administration. It is defined as a public action that influences policy decisions (Nagel, 1987) and action that combines the demands and values of

public into public administration services (Zimmerman, 1986 in Suh, 2005). The emergence of the public participation concept has been associated in government public policy formulation. Public are more interested in openness, accessibility, and accountability in the Government (Langton, 1978). Currently, the attention on the concept of public participation is growing in term of functional analysis and application.

Godschalk et al. (2003) stated that public participation in the planning process is increasing rapidly. They stated that public involvement has become an established and focused part of planning practice. In the early l900s, the United Stated (US) implemented public participation based on public hearings and advisory committees to the good Government reform. The public hearing was created to give public the formal opportunity to comment on plans and development in public policy proposals to authorities. This participation mechanism is still widely used, although public hearings are sometimes criticised for occurring late in the planning process and for encouraging organised opposition to proposed plans rather than collaborative problem solving from the start of the process (Godschalk et al., 2003). The advisory committee was designed as a means for public representatives with specialised knowledge or a significant interest in the decision-making process to provide ongoing advice to authorities on behalf of the public. Even though it is sometimes criticised for failing to include representatives of all community interests (Godschalk et al., 2003), it is still in use.

In 1960s, public hearing practice was changed to a practice of collaboration and power-sharing (Arnstein, 1969). In this practice, stakeholders were given significant

roles and power in decision making process. As argued by Godschalk et al. (2003),

"they are not just responders to staff plans but also are engaged in creating and

selecting plan alternatives". Day (1997) noted that the public should be able to

contribute to and influence planning process that affects them, rather than simply

become a means to obtain public cooperation.

In the 1980s, participation brings different stakeholder groups into opposition. The

conflict management and dispute resolution models have been used. This approach

often relies on a neutral third party with specialised skills and training to facilitate the

conflict between Government and Opposition. This third party often uses techniques

of consensus building and dispute resolution to reach a solution that satisfies all

involved parties (Godschalk et al., 2003). Grant (1994) stated that the recession of the

early l980s has caused public participation to become less of a priority. Decision

makers were most concerned with strategic planning and economic development

(Day, 1997).

On planning practice in certain countries, all practices of public participation usually

overlaps. Rather than choosing one practice over another, decision makers often use

the most appropriate techniques when designing a participation programme. This

strategy allows for active participation by all stakeholders to be built into the process

from the beginning to the end result (Godschalk et al., 2003).

The term "e-participation" was introduced in the early 2000 after e-government

concept was accepted around the world. The starting point of e-participation is based

generally on three development projects. First project is about general development in

collaborative software to help people involve in a common task to achieve their goals. Second project is the development in e-democracy in late l990s where interest rapidly evolved from e-voting to several forms of ICT-supported activities. It enabled direct interaction between Governments and public.

The third project is the development of e-government towards enhanced service delivery process. It can be considered as interaction, including searching, notifications, inquiries, complaints, and many other activities. There are several ICT tools for such tasks. But, there is a need to coordinate all these tools to be used in a user-friendly environment for the stakeholders. Because interaction in such context is complex and goals have to be reached, the arena where it takes place becomes social arena supported by the ICT in public participation.

2.5.1 Participation in Classical Theory

Rousseau's theory of participation is more concerned on the individual participation of each public in political decision making (Pateman, 1970). He imagined an ideal institutional arrangement to be a participatory political system. At that time, Rousseau thought that no organised groups were present but just individuals for decision making situation. There are two motives behind Rousseau's thinking; participation of individuals means making decisions and to ensure good government, and to protect private interests. His ideal system is to develop responsible, individual social and political action through the effect of the participatory process. Rousseau also had two other concerns: individual and community freedom (individual was integrated in a community).

However, John Stuart Mill expanded the Rousseau's theory to develop his ideas in term of representative government and participatory democracy (Thompson, 1976). Mill's theory is contained in his work "Representative Government". He claimed that the ideal form of Government can satisfy all the social state, in which all people participate and that participation is useful even in the smallest form (Thompson, 1976). Mill's theory concerns with two main ideas of good government: how it promotes good management of the affairs of society, and how good government can come to bear on the moral, intellectual, and actions of individuals. Thus, the business of Government is to promote the advancement of the general community in terms of their intellect and virtues, and in practical actions to achieve efficiency.

In the late 1960s, Jurgen Habermans and John Rawls focused the participation debate on the defence of collective rights. In this respect, Habermans stated that "a balanced consensus is discovered as an exercise of power that can be reached by making claims regarding the truth, the right to free speech, and the sincerity of intentions". Therefore, public participation is a way to communicate, discuss, and reach agreements to make people's needs achievable. Meanwhile, Rawls stated that public have basic rights to liberty and welfare that can be achieved by the Government. The Government has to guarantee equal opportunities to the public. He added that "everyone's well being depends on a scheme of cooperation to have a satisfactory life". With the publication of Rawls' theories, the debate about the impact of public participation started to be relevant in the political discussion on public involvement.

In Dewey's theory, participation in democracy requires critical mind and interest, a sense towards cooperation with others, a feeling of public matters, and an aspiration

to achieve common good. Only the public can decide what the public interest is. In order for public to be able to make informed and responsible decisions about their common problems, it is important for them to engage in dialogue with each other in their local communities. Dewey's emphasis on dialogue as a critical practice in democracy inspired later political theorists to explore the vital role of deliberation in democratic systems.

2.5.2 Rationale for Public Participation in Planning Process

Many researchers have written about the value and raison of public participation in government public policy making and decision making process. In review of public participation literature by Day (1997), the ideas of several authors have been stated. In the review, it was stated that many researchers considered that public participation is necessary for every person to realise their potential as humans (Kweit and Kweit, 1990). Barber (1984) and Williams (1976) claimed that active public participation can be a means of allowing democracy and giving public more trust in themselves and their Governments (as cited in Day, 1997). Fagence (1977) in Day (1997) noted that refusing opportunities for public participation in government decision making is often criticised by the democratic.

It has also been argued that democratic theory suggests that participation itself should include more participation from the individual level. The more the participation of a public in a Government process, the more that person may improve his attitudes in being a good public. These attitudes include open-mindedness, tolerance, and honesty. Public participation is generally viewed as a key factor in the planning and decision making process of government public policy formulation. Primarily, decision makers

recognise and accept the idea that participation is an essential part to construct a successful plan (Brodie et al., 2003). Brodie et al. (2003) also noted that public participation is a key factor in generating trust, credibility, and commitment between the public and Government. Those factors are necessary to adopt and execute successful plans and policies. Involving public to participate in decision making process at the beginning of the planning level will give the participants a sense of ownership of the final output and producing higher quality policies with higher quality.

The responsible authorities should ensure that in the early participation process, all necessary information should be made available. Therefore, the unexpected participation by other potential stakeholders does not cause unnecessary delays during the implementation of the plan (Day, 1997). A sense of ownership may also reduce conflict over the long term, because those involved felt responsible for making the plan work (Brodie et al., 2003). Most importantly, the literature recognises that public participation in the planning and decision making process makes an important and positive contribution to formulation of a comprehensive public policy. It is important that public policy formulation to be incorporated into comprehensive planning, and it should be accepted that public participation is the key to comprehensive planning. Public participation should thus be recognised as a critical element of public policy formulation.

2.5.3 From Public Participation to E-participation

This study recognises public participation as all activities or actions involved in the intention of government process or activity, either directly or indirectly (Font &

Blanco, 2003, as cited in Martin, 2004). This includes actions or activities such as debating, voting, sending suggestions, opinions, and ideas.

In contrast, public participation in Malaysia focuses on participative processes that are organised or at least supported by local government authorities towards decision making at the municipal level. These processes represent a participatory space because they influence public's interest. For example, Dewan Bandaraya Kuala Lumpur has developed KL2020 Draft. This process was done in traditional manner where those who are interested in KL2020 Draft explain and share their opinion. This is an experiment by the Government in practising policies formulation involving public participation.

To be more systematic and transparent, all these processes should utilize ICT approach in order to support and promote public participation by using the Internet (e-participation). However, the use of ICT in participative processes still remains as the key cultural, institutional, legal, socio-economic and organizational barrier to the implementation of e-participation (OECD, 2004; Martin, 2004). ICT has the possibility to support the development of e-participation initiative that addresses the perspectives of informing, consulting and participating (OECD, 2004). It can be considered as there as on to participate in the government processes of creating good and quality governance, improve trust and acceptance, and sharing responsibility. Additionally, public have the opportunity to picture how government processes are done, to supervise the implementation of government processes, to balance government organisations' power, to avoid corruption, and to promote active citizenship.

It is necessary to determine e-participation technologies that enable information dissemination, consultation, and participation to run effectively. Technology barriers in terms of technical know-how and required infrastructures to develop e-participation should be considered. Participation mechanisms and tools should be identified to ensure the technologies can adapt with different conditions, necessities, and contexts (Hermanns, 2004 as cited in Martin, 2004). The lack of virtual environments for public participation specifically embedded in EG environment is one of the main challenges for e-participation.

If majority of the public felt that their needs and requirements are taken into consideration, the more involved they will be in the process, and the more effective the process will turn to be. However, e-participation does not only consider public's satisfaction but also public's accountability to make sure the process is effective. In order to assure the feasibility of e-participation process, beneficial agreements need to be forged by the involving parties. Otherwise, e-participation will only become a tool with no meaningful impact (Macintosh, 2002).

E-participation is needed in order to assist the Government in making effective decisions. To come out with an effective decision, the public must provide their comments, opinions, and suggestions to the Government. This is due to the fact that the decision made will be implemented by the public themselves. Along with the EG development, e-participation must be seriously considered since there are case studies showing that this aspect influences the improvement of the government. E-participation also represents a developing field of research (Macintosh and Whyte, 2006). When defining e-participation, some researchers classified the process in the

"e-democracy" category due to the use of ICT to support democratic decision-making process, thus enabling democratic political participation (Macintosh, Malina, & Whyte, 2002).

In general, participation means "to take part or to be involved in something" (Chamber 21st Century Dictionary, 1996). This implies the two-sided attribute of participation processes and requirement of activity to those who may take part or involve (Špaček, 2008). With regards to the EG concept, e-participation approach tries to improve government processes by achieving good governance through public participation. The term refers to interaction similar to Government to public (G2C) and Government to business (G2B) that emphasises on the role of ICT to enlarge the space for discussion and inclusion of opinions of stakeholders into government processes.

According to Europe's Information Society Thematic Portal, "e-participation is about reconnecting ordinary people with politics and policy-making and making the decision making process easier to understand and follow through the use of new Information and Communication Technologies (ICT)". In OECD's report entitled *Public as Partners: Information, Consultation and Public Participation in Policy-making* (2001), e-participation refers to the use of information and communication technologies (ICT) in supporting information, consultation and participation. In a certain sense, it is the same as marketing and Customer Relationship Management (CRM) activities in the business environment.

Similar meaning of e-participation can be found in the United Nation's e-participation index. In the index, e-participation is defined as ICT-enabled "participatory, inclusive, deliberative process of decision making", including the increased supply of information (e-information), enhanced consultation (e-consultation), and the willingness of the Government to take into account the e-input of public into the decision making process and subsequently inform public on what decisions have been taken based on the consultation processes with the framework of G2C and G2B interaction (e-decision-making) that may lead to increased input of public in decision making (United Nation, 2008).

Some researchers use the term "public participation" instead of e-participation (Frewer et al., 2001). Meanwhile, another scholar describes the concept of "deliberative democracy" as mostly focusing on the political debates quality (Winkler, 2007). E-participation is understood as a complicated area of applying ICT in the context of public involvement in the interaction with politicians and Governments (Wimmer, 2007). In this field, e-participation's tools and technologies are conceptualised (Soria et al., 2007) and the definition may seems more technology-oriented rather than outcome driven, although the situation is different. In fact, the situation stresses more on socio-technical and political challenges.

Promoting public participation is the basis of socially inclusive governance. The goal of e-participation should be to improve the public's access to information and services and to promote participation in public policy decision making that impacts the well being of society (Nachmias and Rotem, 2007). Van Dijk and Hacker (2000) emphasised on e-participation's role to improve a governmental process transparency.

They stated that "e-participation has the potential to establish more transparency in Government by allowing public to use new channels of influence that reduce barriers to public participation in policy making".

The term "e-participation" is preferably used because of the values associated with the term "electronic". The responsibility for successful governance rests equally with the Government, the private sector, and the citizenry. With the lessons learnt from studying e-participation in e-government initiatives, the contribution at hand analyses the current public policy formulation framework to integrate it with public participation in ICT via e-government initiative.

2.5.4 E-participation and its Implication on the Study

Theory in various variants existing in democracy hold opposed propositions about their nature and public participation. Participation as a whole has gained recognition among theorists as an essential element that needs to be present for the establishment of democracy. In brief, democracy can be expressed in two very simple principles: l) the members of any group or association should have the determining influence and control over its rules and policies, through their participation in deliberations about the common good, and 2) in doing so; they should treat each other, and be treated equally. This refers to public having equal opportunity to exert influence through political activity if they choose to participate and Government being considered a creation of the public rather than a separated institution standing above its public (Langton, 1978).

Meanwhile, in this study, e-participation is defined as promoting access to information for all public in all kinds of activities with the intention to indirectly or directly influence public policy and allow them to participate in public policy decision making process in establishing better Government-public interaction through ICT. This context focuses more on public role in ensuring the success of public policy when it is implemented. It is meant as a tool to promote concern among the public in formulating public policy. Furthermore, it is supported by ICT as the preferable way in achieving a wide range of participation methods. Transformation to e-participation concept in the current process of public policy formulation will renew practices and procedures used in decision making processes. It can portray Malaysia as a more democratic country where its Government gives special priority to the public.

In the current modern state of democracy, e-participation can be realised through a complex set of practices. These include public rights, an active public body or civil society, and mediating institutions between the Government and public. This makes both the Government and public as the central institution of a democracy. Public should have the influence over the laws and policies to which they are the subjects. They need to have a guarantee for basic rights in term of expressing themselves freely, associating freely with others, and voting for their representatives in free and fair elections. This is the framework of rights in a democratic institution – for the public to be treated equally and without discrimination. Nowadays, majority of people in both developed and developing countries regards economic and social rights as important components of their basic rights as a citizen.

However, protecting these rights effectively for all population segments is one of the main challenges to the Government. Hudson (1998) noted that a healthy democracy needs an active citizenry to fully participate in all aspects of Government processes. The high rates of participation can promote stable democratic Government in two ways. Firstly, participation ensures that public policy will reflect the interest, concerns, and preference of everyone. Secondly, public will learn to be good public, who are capable to understand what is good for the public, and who have the possibility to learn democracy by practicing it (Hudson, 1998).

"Civil society" does not only refer to non-governmental organizations (NGOs), but it is the body of active public that cooperate in many ways to solve their common problems and to promote and defend their interests. They need to participate continually with the Government on issues affecting them and the interests of those whom they represent. The role of public in democracy is not just electing a Government, but they need to frequently participate with the Government. A democratic institution will seek to work closely with the public in finding solutions to problems faced in the country, and in improving the quality and relevance of legislation.

Pateman (1970) stated that there are two additional principles that work as foundations for supporters of participatory democracy. First, the conviction that individual should participate in community, and second, the conviction that individuals' high rate of participation will contribute to the development of the individuals along with the individuals' recognition of citizenship. He also stated that public participation can be divided into three types as shown in Table 2.2.

Table 2.1

Types of participation

Full	Each member of a decision making body has equal power to determine the outcome of a decision
Partial	Each individual does not have equal power to decide the outcome of a decision but can only influence them
Pseudo	No real participation in decision making take place (e.g. the individual is only allowed to question and discuss an already taken decision)

In this regard, bridging the Government and public through communication media is important. E-participation constitutes the key means for informing public about public affairs, and a key channel of communication between the Government and public. But, how well e-participation fulfils these functions is vital for an improved quality of democracy. E-participation provides a vital contribution to several level of democracy simultaneously. It is the representative tool that the people find expression, in which their diversity is manifested, and in which the differences between them are debated and negotiated. It also represents the distinctive democratic attributes of discussion and compromise.

Moreover, the effectiveness of e-participation as a central function of public participation is essential to the quality of democratic life. In carrying out e-participation, it works together with the associations of public society, and has the distinctive responsibility of safeguarding the individual democratic rights of public. Finally, e-participation can observe democratic norms by showing itself as open, accessible, and accountable to the Government in its own mode of operation.

2.6 Current E-participation Framework

E-participation is a technique as a product of e-governance and e-democracy programmes, and therefore the availability of the universally accepted framework is very limited. Some researchers noted that e-participation concept is still under research in certain environments (Avdic et. al, 2010). However, the following discussion tries to clarify several available frameworks on the several aspects of e-participation.

OECD's (2001) e-participation framework is widely known and is constituted by three dimensions: Information, Consultation, and Active Participation. However, Macintosh (2004) has extended it on the basis of these dimensions to create three levels of e-participation: e-enabling, e-engaging, and e-empowering. In the e-empowering level, the public do not only participate actively but extend support to such initiatives. She added that this level is an important mechanism in providing bottom-up (from public to Government) ideas in the political process. UN e-participation framework (United Nation, 2004) is based on similar dimensions: e-information, e-consultation, and e-decision making. The relationship of these dimensions is discussed in the following paragraph.

Information/e-enabling/e-information dimension is 'an active but one-way relationship'. It means that the dimension enables public to access or retrieve information passively. This can be done through websites. The 'Consultation' and 'Active Participation' dimensions have a "two-way relationship". In the 'Consultation/e-engaging/e-consultation' dimension, the Government sets the questions and manages the process. Then, public are encouraged to engage in

contributing their views on a particular issue. Based on ICT tools, this process can happen via online comment, chat rooms, focus groups, surveys, polls, and public meetings. Under 'Active Participation/e-empowering/e-decision making' dimension, public are empowered by actively and independently participating in the Government's decision making process.

The Spidergram framework by Rifkin et al. (1988) helps in understanding participation as a process and assesses the changes and progress of the program over time. They developed this framework to measure community participation in health related programs. This framework describes changes in the process by plotting the situation with five critical factors in participation. The critical factors are needs assessment, leadership, organisation, management, and resource mobilisation. All these factors are joined in the middle of the framework to present a holistic view of program progress. However, they did not implement the framework to assess whether it worked or not.

Tambouris et al. (2007b) proposed a "Five-stage top-down and bottom-up" framework that helps in scoping e-participation as shown in Figure 2.5. However, this framework focuses on the stages of e-participation starting from the Democratic Process (Top) of a country until Technologies (Down). The democratic layer includes all democratic processes of a country and acts as a catalyst by facilitating communication between policy makers and the public (Tambouris et al., 2007b). Participatory techniques are used in order to engage and involve all stakeholders and to address the issue of carrying out participatory processes. The participation technique will be supported by appropriate participation tools based on current ICT

technology that is most suitable and comfortable to the public to participate. Technology may enhance and support e-participation upon a certain level of modification from the traditional participation.
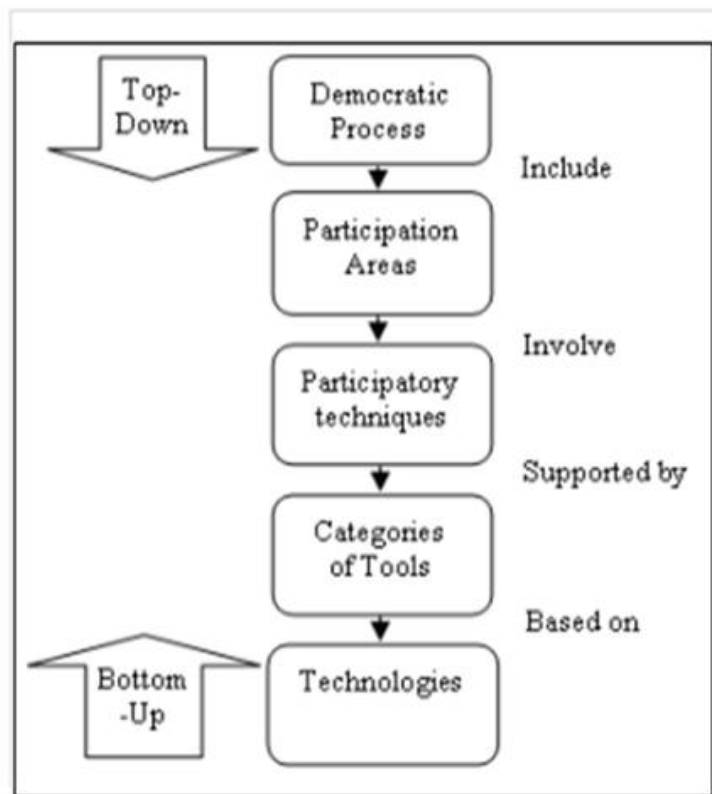
Figure 2.5. Five-stage top-down and bottom-up e-participation framework

Source: Adopted from Tambouris et al. (2007b)

In the bottom-up approach, ICT tools act proactively and lead to introducing new participatory techniques and broaden the participation (Tambouris et al., 2007b). The top-down approach is suitable for democratic developed countries where the role of ICT is just as a supportive mechanism. Tambouris et al. (2007b) concluded that the effective use of this framework depends on the political structure of a country and may not be suitable for those without a democratic environment.

Phang and Kankanhalli (2008) proposed a framework of ICT exploitation for participation that is based on four objectives: information exchange, educational and support building, decision making supplements, and input probing (Table 2.3). The main idea of this framework fits the appropriate e-participation techniques using ICT tools to reach the objective. However, this framework does not highlight the relevant socio-economic issues needed to set up any e-participation objectives.

Table 2.2

A framework of ICT exploitation for e-participation

E-Participation objectives	Information Exchange (Interactive avenue)	Education & support building (Formal participants selection & engagement)	Decision making Supplements (Participation processes)	Input probing (Unbiased data collection mechanisms)
ICT tools that can support the participatory techniques appropriately	Web portal with Online discussion forum, Online chat	Electronic profiling, Online chat, Discussion forum with login feature, Teleconferencing, Videoconferencing, E-mail	Group support systems with process restrictiveness feature, Online pair-wise structured survey, Visualization tools	Online survey questionnaire, Web comment form, Data analysis tools

Source: Adopted from Phang and Kankanhalli (2008)

Another model is proposed by Islam (2008) called e-participation model or 7Ps model. The proposed model has seven phases, starting from the bottom to top as depicted in Figure 2.6.
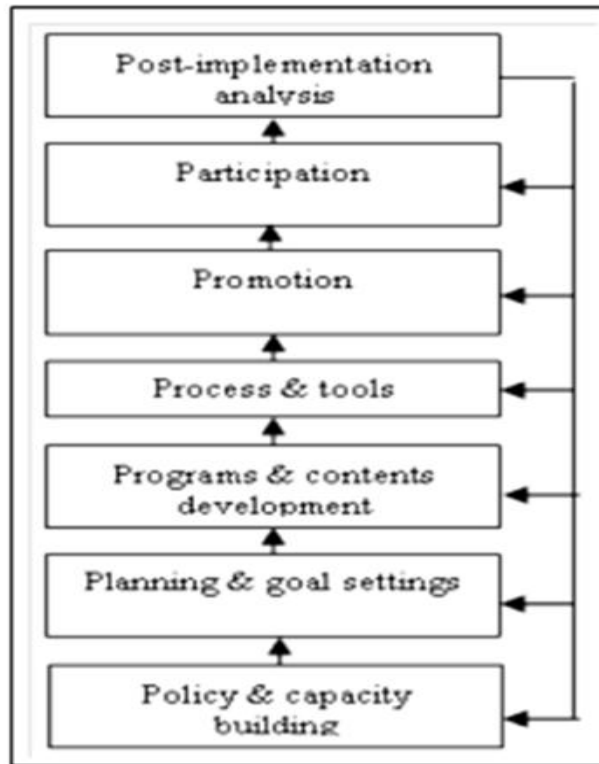
Figure 2.6. 7Ps Sustainable e-participation implementation model

Source: Adopted from Islam (2008)

This model discusses socio-economic settings and tools to bridge the gap in Phang & Kankanhalli's (2008) framework. Islam (2008) stressed that this model is a sustainable e-participation framework since it is designed to fit under any socio-economic conditions of any country and can be initiated both by public (state) and private agencies.

2.6.1 E-participation Framework and its Implication to the Study

The framework explained earlier possesses its own roles depending on the scopes of the study that will be carried out by the researcher. Overall, the framework developed is presented in Table 2.4 as follows:

Table 2.3

Comparison of available frameworks

Framework	Scope(s)	Weakness(es)
Spidergram framework by Rifkin et al. (l988)	To understand participation as a process and assess the changes and progress of the program over time.	They did not implement the framework to assess whether it works or not.
Five-stage top-down and bottom-up e-participation framework (Tambouris et al., 2007)	• Focused on the stages of the e-participation starting from the Democratic Process (Top) of a country until Technologies (Down). • Suitable for the democratic developed countries where the role of ICT is just supportive.	This framework depends on the political structure of a country and may not be suitable for those without a democratic environment.
A framework of ICT exploitation for e-participation proposed by Phang & Kankanhalli (2008)	Fitting the appropriate e-participation techniques with ICT tools to reach the objective.	This framework does not highlight the socio-economic issues to set up any e-participation objectives.
7Ps Sustainable e-participation implementation model proposed by Islam (2008)	Discusses on socio-economic settings and tools to bridge the gap in Phang & Kankanhalli's (2008) framework.	This framework does not highlight the socio-technical perspective.

In the context of this study, the researcher will view e-participation from the socio-technical perspective. This is due to the shortcoming in stakeholders' roles in every phase as stated by Redburn and Bust (2003). According to them, emergence of technology will ensure stakeholders' feedbacks more valuable. This study serves as

the extension study of e-participation in preparing a complete framework for the public policy makers by applying ICT as the backbone to increase the stakeholders' participation as a whole. The researcher will also give special attention to this framework's different kind of usage from the socio-technical perspective.

An effective e-participation structure requires a framework with clear and complete guidelines. Due to that, the researcher will refer to three frameworks that are directly related to this study, which are five-stage top-down and bottom-up e-participation framework (Tambouris et al., 2007), a framework of ICT exploitation for e-participation (Phang & Kankanhalli, 2008), and 7Ps Sustainable e-participation implementation model (Islam, 2008).

2.7 E-participation in Other Countries

Case studies from other countries are also reviewed to act as a reference in developing Malaysia's e-participation framework.

i) United Kingdom

Hansard Society has been organising e-consultations for the UK Parliament since l998. Their goals are to enable the public with significant knowledge to inform and advise policy makers on specific areas of policy. Online consultations have generally been set up in co-operation with organisations specialising in the policy area. The Hansard Society's main role is to make the process of e-consultation works. Participants will engage in conversation for one month to discuss matters related to policy and also exchanging their experiences. As an output, a report summary is

produced by the Hansard Society and will be submitted to the Parliament as the evidence.

ii) Estonia

TanaOtsustan Mina (TOM) or *Today I Decide* is a website that was initiated by the Estonian Government press office in June 200l. The objective is to support public participation in the policy making process by allowing them to comment on draft laws and submit their ideas for new laws. To participate in TOM, public should register their names and e-mail addresses. In the future, they hope that registration can be made based upon digital signatures.

iii) Sweden

In 2000, the city of Kalix in Northern Sweden invited local residents to participate in an online policy formulation to plan the reconstruction of the city centre. The policy forum facilitates public to talk about the issue with politicians. There was also a survey in which participants could vote for their planning preferences. Participants should register and will be issued with a password to ensure that only those entitled can vote (a person can only vote once). To make this project a success, Internet access was made available for local people via schools and libraries, so that nobody was excluded due to the digital divide.

iv) Australia

In June 2000, the Australian Prime Minister and Minister of Defence launched a review of defence policy. As part of this review, a discussion paper entitled *Defence Review 2000 – Our Future Defence Force* was released for public consultation. A

consultation page was placed on the Department of Defence's website for reference. This consultation page included an electronic consultation kit, a copy of the discussion paper, a summary of the paper for easy access to key points, an electronic response form posing questions on the key points in the discussion paper, and a schedule of public meetings.

2.8 Malaysian EG

Malaysian EG was implemented with the introduction of Multimedia Super Corridor (MSC) in 1996 (MAMPU, l997b). The EG initiative introduced the country to the Information Age as one of MSC flagship. The main objective of EG is to improve the internal operation of the Government and its services to all Malaysians. It seeks to improve the convenience, accessibility, and quality of interaction with public and businesses; simultaneously, it may improve information flows and processes within the Government, speed and quality of policy development as well as co-ordination and enforcement. In addition, EG plays an essential role in catalysing the development of MSC, as well as furthering the political and economic development goals stated in Vision 2020 (MAMPU, 1997a).

The vision of EG (Figure 2.7) is drafted so that the Government, businesses, and public can work together for the benefit of Malaysia and all of its citizens. The vision calls for both reinventing the Government by using multimedia/information technology to dramatically improve productivity and creating a collaborative environment that fosters the ongoing development of Malaysia's multimedia industry (MAMPU, 1997a). The vision focuses on effective and efficient service delivery for

the Malaysian public, enabling the Government to become more responsive to the needs of its people.
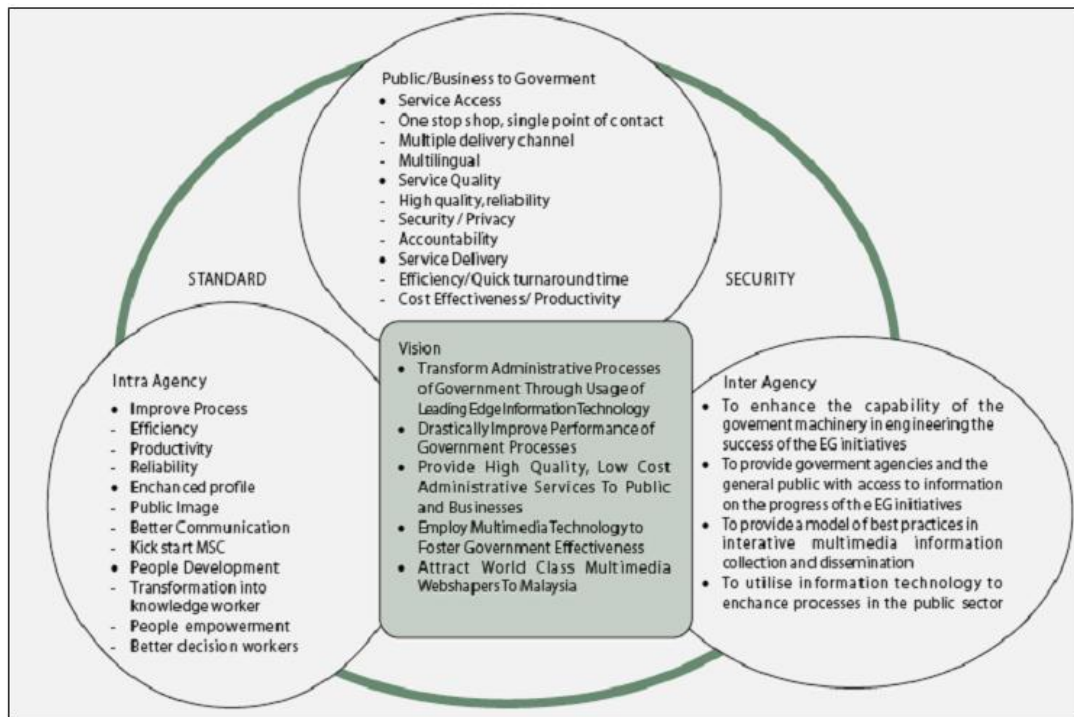
Figure 2.7. Malaysia EG vision

Source: Adopted from MAMPU (1997a)

2.8.1 Approach to Realising the Vision

Realising the vision of EG requires a comprehensive development and implementation program encompassing all Government aspects. It requires new processes, systems, structures, trainings, skills, and shared values. Initially, the EG flagship application targets a few key services such as; (1) Electronic delivery for drivers and vehicles registration, licensing and summons services, utility bill payments, and Ministries' online information, (2) Government procurement, (3) Prime Minister's Office activities, (4) Human resource management and (5) Project monitoring. Once this pilot project is up and running, more services will be undertaken, expanding with time to a wide ranging roll out programme embracing more Government departments and services on the federal, state, and local levels.

The initial set of priority pilots has been selected by the EG Steering Committee that comprises Government officials led by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), representatives from the Multimedia Development Corporation (MDC), leading private companies involved in the multimedia/IT sector, and consultants from McKinsey & Company. The Malaysian EG identifies the services provided by the Government and the spectrum of multimedia applications that will help deliver these services according to the objectives of EG. The landscape of application is grouped into three categories: Public/Business to Government, Intra Agency, and Inter Agency.
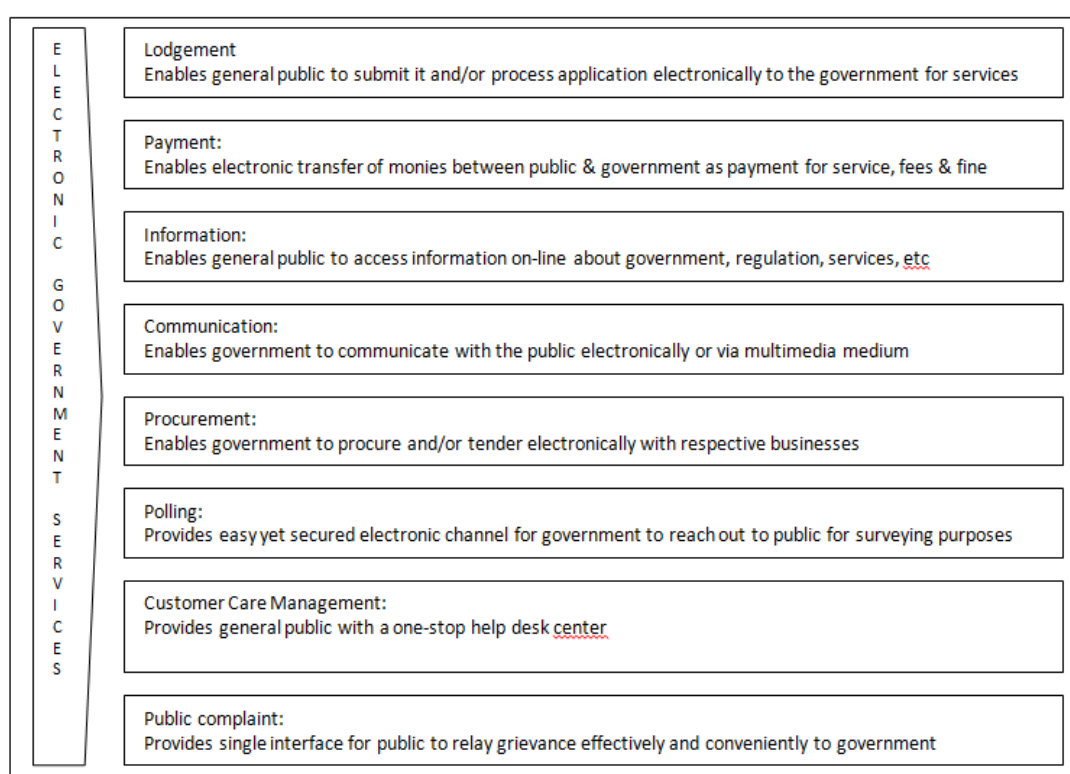
Figure 2.8. Public and business service categories

Source: Adopted from MAMPU (1997a)

In developing the universe of multimedia applications, current services provided by Malaysian Government ministries and agencies to public and businesses have been

identified. Each service is then grouped into categories that are defined as generic function performed across Government ministries and agencies (see Figure 2.8). These service categories are then divided into transactional and informational groups to generate the full range of potential EG services that can be offered to public and businesses.

2.8.2 Malaysian EG Conceptual Model

The concept solution for the pilot follows the vision of EG where the philosophy of "bureaucracy-centred" Government gives way to more open, "public-centred Government" (MAMPU, 1997a). Services will no longer provided where the Government is, but where the people are. For example, instead of having to go to government offices and wait in long queues to conduct government services like renewing passport, picking up forms or paying fines, it will be possible to go to an EG kiosk in a shopping mall or access the service on a home PC.

There will no longer be separate queues for each service, but with the one stop service windows provided by EG, public and businesses will be able to conduct a wide range of services from a single point of contact, in one short visit. For example, a person can electronically schedule a test-taking appointment or renew a license where he/she is registered. Figure 2.9 describes the conceptual model for EG services.
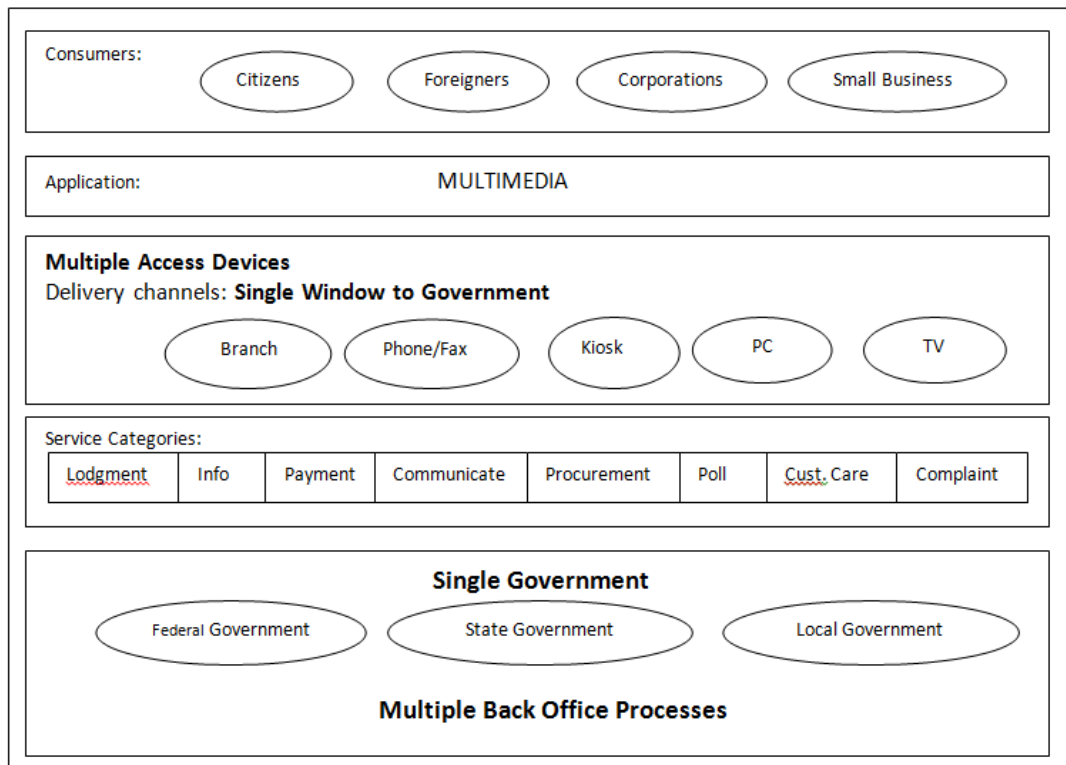
Figure 2.9. Conceptual model for Malaysia EG services

Source: Adopted from MAMPU (1997a)

Under this conceptual model, the objectives and visions of the EG services to serve the public and businesses can be achieved. EG's objectives are to enhance services access and improve services quality to public.

2.8.3 EG: E-participation in Malaysian Context and limitation

myGovernment (http://www.gov.my) is the government's initiative in improving service delivery. myGovernment is an initiative spearheaded in 2003 by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), a unit under the Prime Minister's Department. The initiative won top prize in the public sector award category during the 2008 Global ICT Awards. This portal began its operation in 2005 with aiming to enable the public and business community to obtain Government-related information and services online. Its objective is to be the

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one-stop portal providing Government-related information and services online. Services provided by the Government can be obtained through the local service centre. Services offered are prime news display, event calendar, job vacancy, tender notice, advertisement, announcement, public complaint, and form downloads. Via this portal, dealings with Government agencies become more efficient and easy, and the public can reduce time spent going to the physical counter.
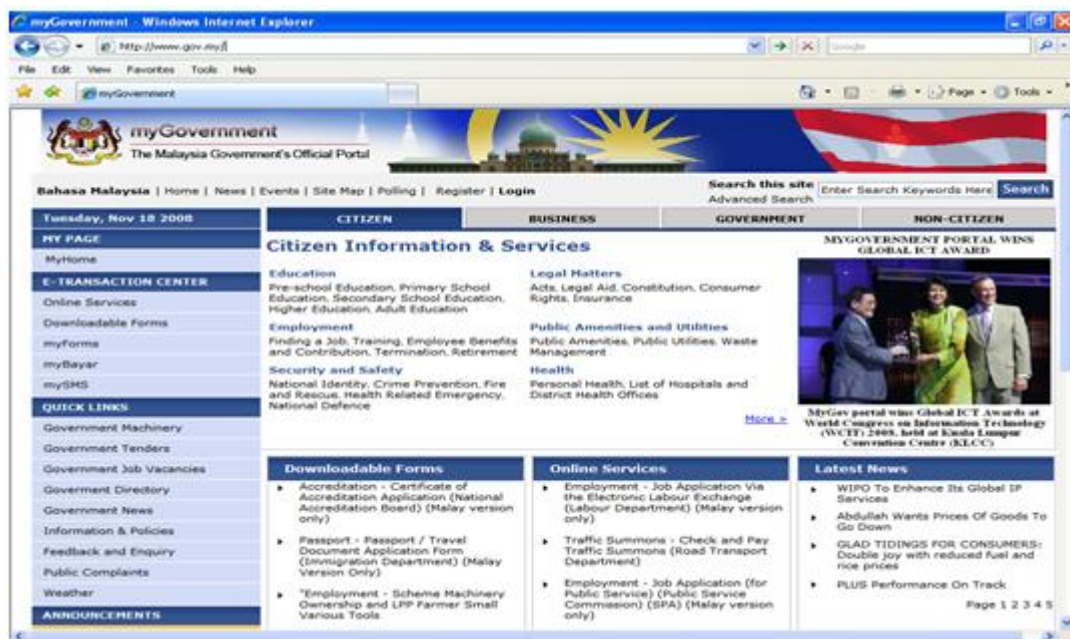
Figure 2.10. myGovernment portal

Source: http://www.gov.my

myGovernment portal contains six components: 1) MyHome where users can register with myGovernment and it allows personalised information display according to their demand. Through this personalisation, users are able to accept message update, upload documents, and view service online status conducted at myGovernment and web agency sites link; 2) Message Centre that serves as a communication centre that facilitates dissemination of information and message between users and myGovernment administrators; 3) E-Community Centre that provides community

oriented services such as vote, service or information subscription, advertising, and general questions; 4) E-Business Centre where users can get all the downloadable forms online and interactive services offered by public sector agencies in myGovernment; 5) Administrative Centre enables myGovernment administrators the access to manage and operate the portal; 6) Content Delivery Centre that provides infrastructures crucial in managing myGovernment content such as search engine facility and myGovernment content broadcasting via the Internet. The most popular services on the MyGovernment portal are accessing Government tenders, checking employment prospects in Government agencies, renewing driving licence, paying traffic summons, registering business, and filing income tax return electronically.

The portal links more than 900 public sector websites at the federal, state, and local levels as well as delivering government services to the public. Currently, approximately 30 per cent of Malaysian Government agencies are providing their services via myGovernment portal. These are among many other criteria evaluated by Brown University (BU) researchers in the annual Global E-Government Report. The number of visitors to the portal has increased almost threefold in two years. According to MAMPU, the portal had 6.5 million visitors as at May 15, 2008. The multichannel service typified by myGovernment is being continued in the Tenth Malaysian Plan 2011-2015, and further improvement for the convenience of users is being conducted.

E-community Centre is a component that encourages public to get involved with the Malaysian Government. However, based on the current status, only online poll mechanism is running successfully. This circumstance is not enough to attract public

involvement in the Government process. Based on statistics obtained from myGovernment portal, the average number of people involved in polls is only 1000 people per poll.

Moving back to the problem statement, the Government should extend the effectiveness of this portal to encourage public's e-participation. With democracy serving as the background principle, public should be involved in some Government processes. In this context of research, the researcher focuses on public policy formulation. In a number of public policy formulation, the Government should recognise the ideas, opinions, and suggestions from the public who are part of the stakeholders. That is why the researcher thinks that Malaysian Government needs an e-participation platform to engage and ensure the public's involvement in Government processes.

2.9 Public Policy Formulation

There are a number of public policy definitions given by prominent social scientists. One of them is Dye (2008) who defined public policy as "the public and its problems". The problems are, for instances, urbanisation including population growth, environmental issues, public transportation (National Urban Policy), and global economic and financial crisis (Stimulus Package). Public policy concerns with how issues and problems are defined and constructed, and how they are placed on the policy agenda.

Friedrich (1963) defined public policy as a planned course of action of a person, group or Government within a given situation providing barrier and opportunity where the public policy is proposed to be utilised and overcome in an effort to achieve

a purpose, objective, and goal. Daneke and Steiss (1978) have the same idea, as according to them, public policy is a broad guide to present and future decisions, selected in light of given conditions from a number of alternatives; the actual decision or set of decisions designed to carry out the chosen course of actions; a projected programme consisting of desired objectives or goals, and the means of achieving them. Dodd and Boyd (2000) defined public policy as commitment to a course or plan of action agreed to by a group of people with the power to carry it out and enforce it. In other words, public policy is a choice or decision made by the Government that guides subsequent actions in similar circumstances.

There are various definitions given to public policy but they have the same meanings; public policy discusses the processes, decision and action of the Government that are designed to solve public problems. In this study, the researcher used general definition of public policy, which was "related to public interest since it somehow affects all actors, even though not all were affected in similar way and it is in relation to the Government objective". Briefly, policy is made in the public's name, made or initiated by the Government, and interpreted and implemented by the public and private actor. Having public policy defined in this study, the researcher could proceed to describe the context of public policy in Malaysia.

2.9.1 Context and Key Factors of Public Policy in Malaysia

Public policy in Malaysia has changed within the context of political environment and stability. Malaysia has experienced constant economic development during the past century and has benefited from a lengthy period of equal growth. It has also remained

the basic element of national development that has improved the life of Malaysian citizens.

The implementation of a new development philosophy in 1970 after the ethnic conflict in 1969 has had an important impact on public policy. The new public policy has restored the previous development model that highlights a laissez-faire urban-based economy, and has focused on large-scale Government-funded agricultural and rural development programs. The new development philosophy included the idea of growth with equal sharing. The key goals of this philosophy were national unity and harmony. It was believed that without harmony, economic sustenance, higher incomes, and enhanced standards of living, unity would be more costly to achieve and become less meaningful. Unity was therefore to be achieved by equal sharing of the fruits of economic growth among the major ethnic groups and the poor of all groups.

The philosophy of growth with equality and its associated goals of equal distribution and greater well-being entailed a commitment on behalf of the Government to play an active role in the economy and the provision of services. To achieve successful public policy, a number of factors, issues and considerations must be taken into account during the policy development. These factors will be employed by the citizens and Government. The factors are listed in Table 2.5 below.

Table 2.4

The factors and issues considered during policy development

Factor	Description
Public interest	Focus on the best interest of society as a whole
Effectiveness	It depends on how well a public policy achieves its stated goals.

Factor	Description
Efficiency	In terms of resource, it should be fully utilised to achieve goals and further to implement a public policy.
Consistency	Public policy must be aligned with broader goals and strategies of Government with constitutional, legislative, and political approaches used.
Fairness and equality	Degree to which the policy increases equality of all members and sectors of society. This may link directly to consideration of public interest.
Reflective	Other values of the society or the community such as freedom, security, diversity, communality, choice, and privacy.
Socially acceptable	Citizens and interest groups feel that the policy reflects their important values such as fairness, equality, consistency, and justice.

Source: Adopted from Smith (2003)

However, the values presented above are the basis or foundation of public policy. It refers to the values of individuals, groups, and society as a whole. The challenge of deciding and affirming some of the values must be recognised and discussed in a democratic society openly. It should be noted that public policy is ought to be developed by a team. The team members should include authorised groups or departments, individuals with a variety of knowledge and skills, individuals with expertise and knowledge of stakeholders and the community, representatives of central agencies that possess function in endorsement, as well as those who are responsible for the implementation. There is an increasing awareness in the inclusion of stakeholders as members of the public policy development team. This is consistent with the concept of citizen participation. The researcher studied the political system and Government structure of Malaysia to know more about the environment of political setting in influencing public policy formulation.

2.9.2 Public Policy Making Process

Experts who study public policy have identified four main stages in the public policy process namely the identification of a problem, the formulation of a policy change to solve the problem, the implementation of the policy change, and the evaluation of whether the solution is working as desired or vice versa. In this way, public policy process can be seen as the steps the Government takes to address a public problem. Figure 2.ll shows the public policy life cycle.
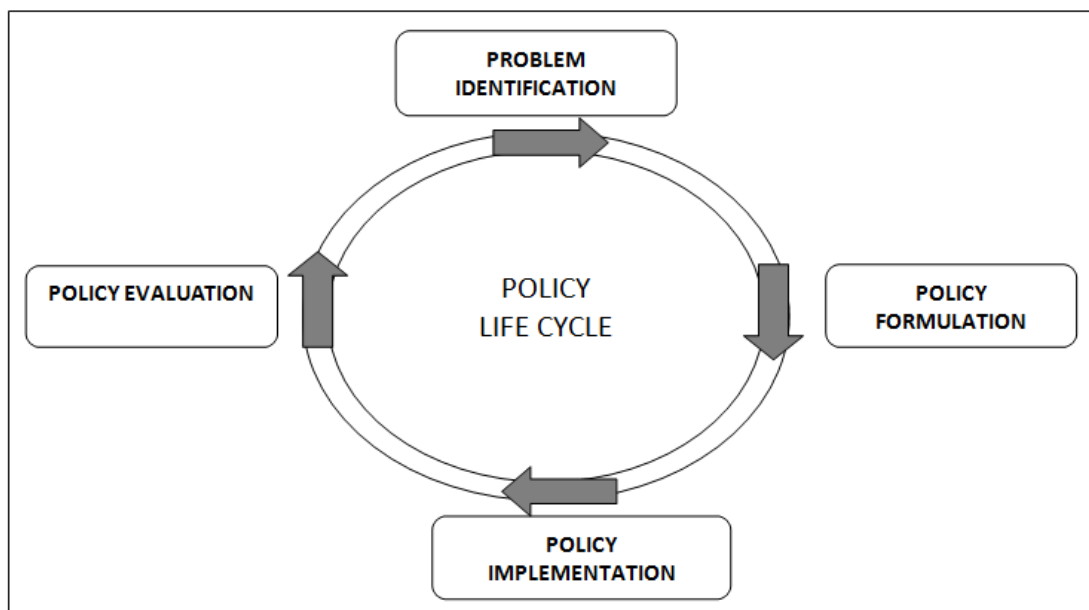
Figure 2.11. Policy life cycle

Source: Adopted from Lester et al (2000)

i) Policy identification

Policy making process is a complex process that varies significantly from one policy to another. However, there are several general characteristics that represent policy making process. First of all, a public policy problem must be identified and the cause of the problem has to be understood. There are many instances where problems have long existed without being identified. As an example, Malaysia has been a traditional importer of food including rice. The practice continues even after the financial crisis

in l998, which had made the cost of imported rice to be more expensive due to lower Ringgit value. However, only when an acute shortage of rice supply happened during the crisis that the domestic rice production became a public policy problem and the Government had to formulate a food security policy to address this matter.

One of the most important discussions in public policy development is whether the Government should take action at all in response to a particular issue or not. Since public policy is generally made and initiated by the Government, those who frame the issue to be addressed by the policy often exert enormous amount of influence on the Government over the entire process through their personalities, personal interests, political affiliations, and others. Thus, in bureaucratic Governments, policy is often made without clear consensus about the goals. The process is ad hoc and political, driven by election, balance of power in legislatures, media coverage, scandals, personalities, and even accidents (Osborne & Plastrik, 2000).

ii) Policy formulation

Public policy formulation refers to efforts of the Government in addressing issues affecting the public. The Government – at all levels (federal, state or city council) – develop public policy to address pertinent issues affecting the public and their problems in education, health, social welfare, public safety, and others. Rayes (200l) noted that a particular and essential feature of a public problem is based on human acts that have consequences on others, and some of these are perceived to create needs to the extent that relief is sought. He added that if a transaction to control consequences is relatively restricted in effect, it is private. If the transaction has a broad effect, it is public.

Reyes (2001) also mentioned that public goods are goods in a broader sense since they can be used by many people at the same time, but this is not the case for private goods. Policy is the finalised course of action decided upon by the Government and it may come in the form of laws, regulations, subsidies or incentives. Public policy formulation consists of problems, actors, and the policy itself. While problems have been explained above, actors are those who have the authority to influence or implement policy. Among the common actors are government officials as they are the policy administrator, the executives, the legislators, the judiciary, and also members of the public who play active role in policy making process such as members of non-governmental organisations (NGOs).

According to Smith (2003), policy issues can be divided into two categories: those already on the public policy agenda and those that are not. He also added that if an issue is already on the public policy agenda, it has a sufficiently high profile, and a formal process is likely to be in place. If an issue is not on the public policy agenda, the job of the actors is to provide information and to take other steps to raise awareness and place it on the agenda. Gerston (2004) suggested that an issue will appear and remain on the public policy agenda when it meets one or more of these three criteria; it must have sufficient *scope* (a significant number of people or communities that are affected), *intensity* (the magnitude of the impact is high), and/or *time* (it has been an issue over a long period).

The requirement for public policy formulation may originate from a number of sources. It is helpful to think of a policy response to these sources as being either reactive, preactive or proactive (Smith, 2003). The author explained that *reactive*

source is when it reacts to issues and factors that it looks as a slight warning from the internal or external environments through resolving problems and issues, meets all concerns of actors, reacting to decisions by other level or Government departments, reacting to media attention as well as reacting to crises or emergencies. *Preactive* source is when it responds to the need that is recognised. This is because actors who look into the environment can also see the potential or possible problem and issue that could have an effect on them (Smith, 2003).

Potential policy formulation is formulated after the problem has been identified. Policy makers, administrators, interest groups, and citizens will normally engage in discussions and debates on various alternative solutions, although most of the time, participation of the citizens at large is limited due to time constraint. Complete data and information on the particular subjects must be made available and it is essential at this stage of process for everyone to have a clear picture of the real issues and the potential solutions. Certain tools are used in the analysis of the problems and the alternative solutions.

However, in practice, generally most of the public policy decisions made reflect only small changes at a particular time. The main actors of the public policy regularly see the changes at a particular time as the most beneficial situation and are able to work efficiently (Smith, 2003). It requires a big picture to see the complexity of the problem related to developing integrated public policy. This may recommend the opportunity for *proactive* policy development, which can move Government and society in a new direction. At this time, *proactive* public policies look more to vision than actuality or reality. Moreover, public policy can be driven by departments,

political leaders or a highly influenced actor such as an industrial group or by the community.

iii) Policy implementation

Once the formulation process is completed and a policy decision has been made, the various actors in the policy process will then begin implementing the policy. Policy implementation is the key feature of the policy process. In fact, it is also being regarded as the most difficult stage even though some parties claimed that the implementation process is largely preceded with no or little controversy. The common notion is that the policy once agreed and decided by the legislatures, should be implemented precisely as to what they had intended. Such belief can be supported on the premise that bureaucracy is a neutral implementer of public policy who simply carries out the will of the legislature.

However, such notion might not be necessarily true since the assumption of bureaucratic neutrality is not supported by actual experience. If bureaucracy is a strictly neutral institution, then all the problems that people cited about bureaucracy, in particular the problems of accountability and discretion, would never enter into discussion of implementation (Birkland, 2005).

The success of a public policy largely depends on the success of its policy implementation. However, the failure or limited success of a public policy may also be blamed on policy designers who sometimes fail to possess good knowledge about the capacity and commitment of implementers. Capacity refers to the availability of resources for an implementing agency to carry out its task.

Resources refer to monetary, human resources, authority, autonomy, and knowledge to effectively implement the policy. Commitment refers to the desire of the implementers to carry out the goals of the top-level policy designer. According to Birkland (2005), commitment refers to the values and goals of the policy designer that are shared by the lower-level implementers particularly the blue-collar workers on the street.

iv) Policy evaluation

Policy evaluation is fundamental to overcome the bane of traditional policy making process normally dominated by political parties, interest groups, public opinion and others. Through policy evaluation, the administration is made accountable to the citizens by explaining all its actions transparently. Such efforts will gradually raise the level of people's trust in the public administration.

Policy evaluation is also conducted to produce useful information for the development of policies and programmes as well as for their implementation by systematically having the effects of the policies and programmes measured, analysed, and objectively judged against certain criteria. Effective policy evaluation will result in improved decision making, optimised resource allocation, and enhanced public accountability (Tsukamoto, 2003). Policy evaluation can be performed before or after the implementation of the policy.

Nevertheless, the actual period of evaluation will be determined based on the objectives, goals or characteristics of the subject to be evaluated. Policy evaluation carried out before implementation of a policy can provide useful information on the

justification of problems identified or decisions to be made from several alternatives. In Malaysia, the latest policy evaluation approach applied by the Government is the outcome-based planning, monitoring, and evaluation approach to ensure that all public policy implemented achieve the desired objectives.

2.9.3 Formulation of Policy in Malaysia: Institutional Framework and Practice

There is a difference between public and formal agenda. Public agenda are related to problems or issues in which most people are sufficiently concerned about to make representation, while formal agenda are only those matters that the Government has to perform (Ripley & Franklin, 1982). One of the reasons why the Government needs a public policy is to address issues and problems affecting the public at large and to manage public goods and services.

Policy output is focused on the production and use of public goods and services, where public goods are utilised by many people at the same time. Meanwhile, the public policy instruments are rules and procedures, laws, regulations, programmes, and projects. Despite the lack of information on public policy formulation, the researcher will explain how public policies are formulated in Malaysia based on available information. Majority of the public policies in Malaysia are prepared by the Cabinet. The Cabinet is the main policy making body of the Government.

In Malaysian environment, public policy is usually planned based on the political and social requirements and also based on the future of the country as a whole. Malaysia's political and social structures are closely connected to each other. Thus, every public policy development has to be carefully prepared by taking into consideration various

issues such as social, politics, and economy in order to maintain equality and to satisfy all citizens.

A Senior Program Coordinator in Programme for Public Policy Studies at Institut Tadbiran Awam Negara (INTAN) stated that public policy development process in Malaysia has to go through several stages namely identifying the problems, planning, proposing and formulating appropriate options, validating policies, implementing the appropriate action policy, coordinating various events to suit the established policy, and finally evaluating the effectiveness of such policy (personal communication, March 23, 2010). However, due to the complex and heterogeneity of the societies in Malaysia, revision of public policy is crucial.

All public policies are developed within the same institutional framework and are according to the same system. The process of developing public policy consists of certain components, namely politics, administration, parliament, and legal. The related decision making is bounded by the key values of the equitable growth philosophy. Based on discussion at INTAN Bukit Kiara, the social and economy policies in Malaysia are very closely linked to the formulation of public policy (personal communication, March 24, 2010). The nature of creating a public policy is complex due to the involvement of various interest groups during the process of decision making.

Public policy in Malaysian practice is usually produced through three channels. The first channel is through politics where the public policy is kicked off through Cabinet commands or suggestions by several political reigning parties. The second channel is

based on administrative processes at the ministerial level. In this channel, a policy normally has several implications on the government administration, thus the policy is discussed in high-level government meetings. The third channel is from the integrated or interaction approach. This approach is a combination of both processes (politics and administrative) through the Special Committees to arrange study regarding the policy suggestion in detail before presenting it in the Cabinet meeting (personal communication, March 23, 2010).

The public policy development planning process also engages with both the private sector and civil society. It provides an effective interaction platform with the Government. Such interaction has not only assisted in resolving problems but also provided feedbacks on a wide range of issues, including Government policies and the impact of policies and programmes on various segments of society. Based on output obtained from discussion, certain groups of actors that have authority to influence and implement policy have played their roles in giving more input for policy content. In general, there are five actors have been recognised in the implementation phase namely government public administrators, executives, legislators, judiciary, and the public who play active role in influencing the policy. These five groups are the key actors in ensuring the success of policy implementation. The ingredients for policy success are capability of managers or leaders, public support, acceptable political status, financial support, strong institutional support and delivery, good coordination, clear policy objectives, clear decision rules, and response to feedbacks from stakeholders.

In contrast with policy success is policy failure. Normally, policy failures in Malaysia are caused by lack of integrity (corruption, abuse of power, unethical dealings, conflict of interests), contradiction between policies (policies should be interrelated to each other), low public participation (lack of interest, poor public relations), limited resource (insufficient funds, personnel or lack of technical support), and absence of a policy champion (lack of capable leader or personality who can make the difference).

Malaysia's Constitution in Article 10 Clause (l)(a) states that "every citizen has the right to freedom of speech and expression". As for the citizens, they can take action either independently or by forming a group/ crowd to place their opinions/ ideas/ suggestions for Government consideration. However, in this current situation, these individuals and interest groups do not have the exact authority to formulate a public policy. Yet, their pressure group is able to obtain a variety of strong support from public via their movement, campaign, action, and activities. Moreover, they can persuade the policy maker to realise and understand the root of a problem and dilemma from a clearer picture. To do this, they utilized the mass media (traditional/online approach) as their tool to express their intention to the Government.

Based on the discussion with Mr. Faizal Kamaruddin, Dato' Dr. Mohd Padzil bin Hashim, Mr. Norraffendy bin Abd. Khalid, Mr. Muhammad bin Abd. Rahman and Mr. Mohamad Najib bin Mustafa and information from several sources (Marvin, l972; Leong, l992; Zuraidah et al., 2011), the researcher developed an institutional framework to show an overview of policy formulation in Malaysia as shown in Figure 2.12.
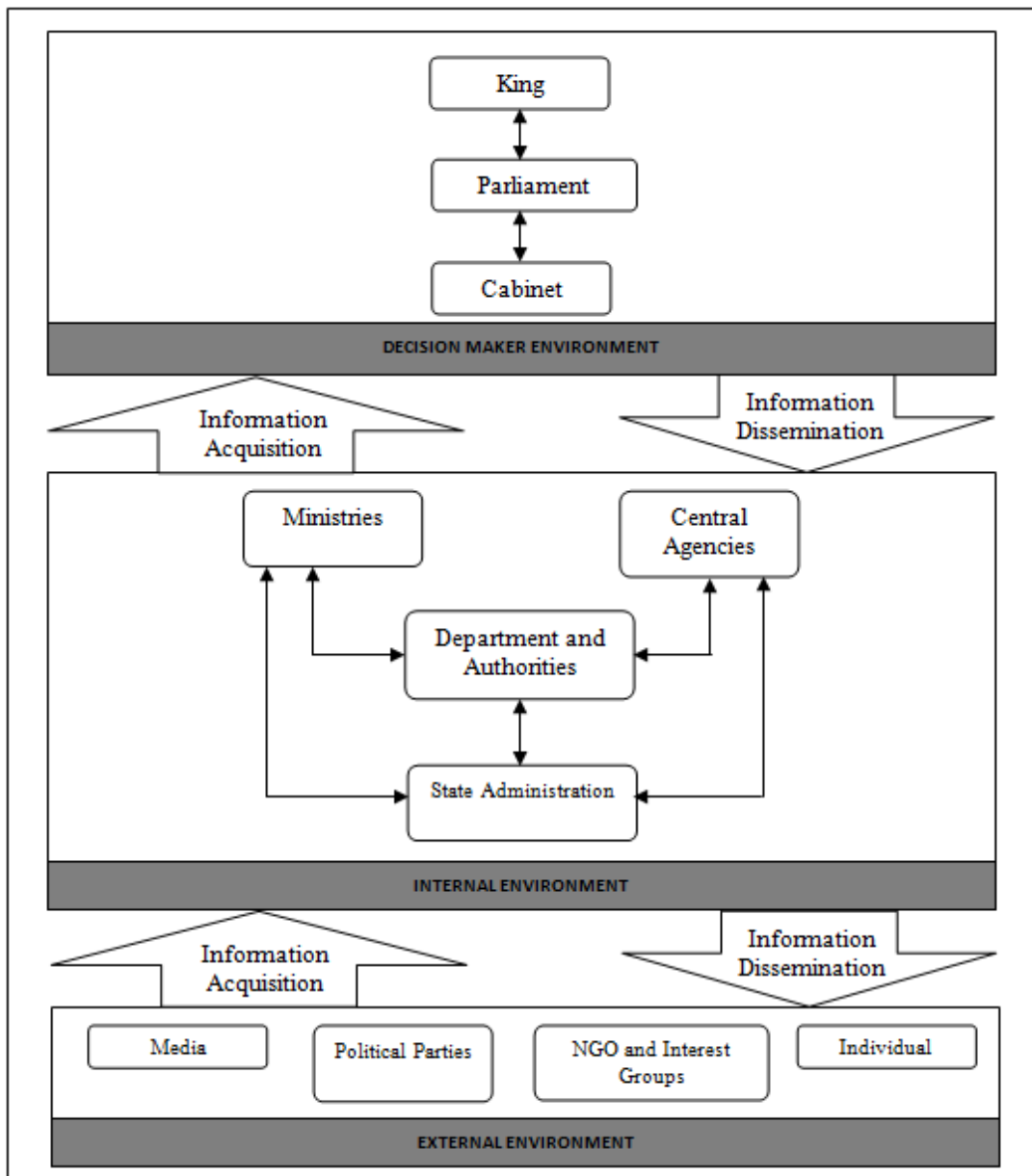
Figure 2.22. Policy formulation institutional framework

Based on Figure 2.12, the framework is divided into three environments namely "External Environment", "Internal Environment", and "Decision Maker Environment". These environments are closely related and essential in the process of planning and forming a public policy. Generally, parties involved in public policy formulation process include individual members of the public, Non-Government Organisations (NGOs) and interest groups, political parties, mass media (traditional or

online), federal public service entities (Government machinery), the Cabinet, Parliament (House of Representatives and Senate), and the King. However, the King's duty is limited to matters pertaining to Islam and Malay culture only. The Council of Rulers is referred to for those decisions.

Several major types of public policies are formulated through this institutional framework. Federal public service institutions play a leading role in the formulation of public policies. These institutions include the ministries, central agencies, departments and authorities, and state administration that also implement the policies. They also work together closely under the aegis of the Cabinet. It is also their responsibilities to execute and control the implementation process of the public policy.

The researcher calls this as the "Internal Environment". These central agencies comprise of the Treasury or Ministry of Finance, Economic Planning Unit (EPU), Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Implementation Coordination Unit (ICU), Performance Management & Delivery Unit (PEMANDU), Public Services Department (PSD), and the Prime Minister's Department (PMD) as shown in Figure 2.13 below. Central agencies are authorised to consider and approve requests for projects and funds from relevant Ministries.
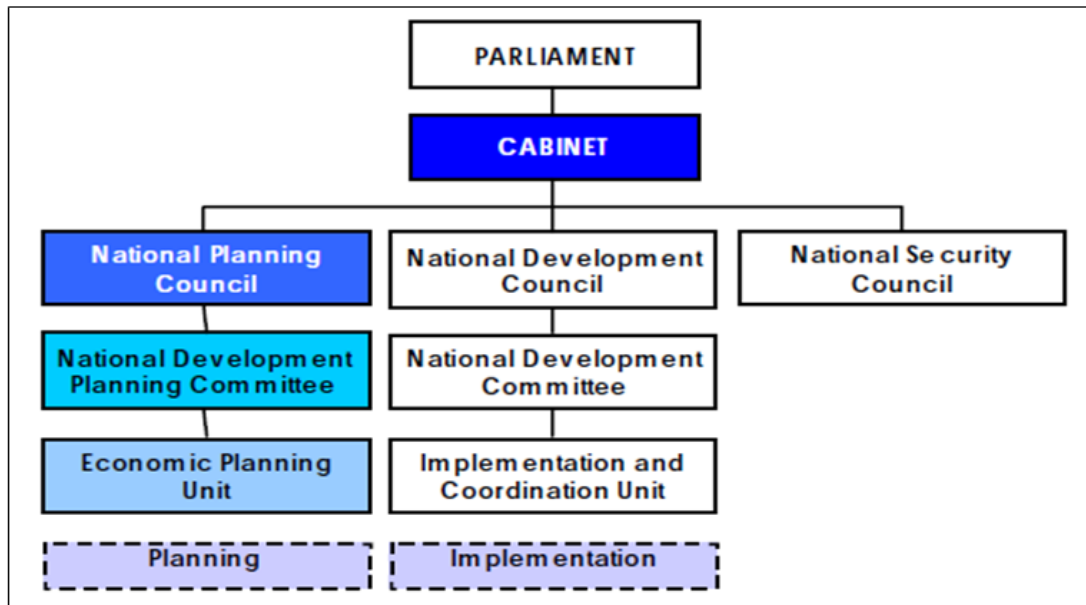
Figure 2.33. Central and authorised agencies for planning, coordinating, and evaluating policy and programme

Source: Adopted from EPU (2004)

The main role of EPU is to develop draft of plans designed to steer the Federal Government's Outline Perspective Plans (OPPs), five-year development plans, and annual budget. In order to effectively perform these three tasks, EPU collects information and proposals from Inter-Agency Planning Groups (IAPGs) and Technical Working Groups (TWGs) of each IAPG. Every IAPG concentrates on an important subject matter such as education, health, telecommunication or eradication of poverty. Its members are senior officials from relevant Ministries and central agencies.

The function of TWGs is to focus on technical part of IAPG works. TWGs members generally are the subordinates of IAPG linked members. However, many TWGs recruit their members from NGOs, academia, the private sector, and experts to help them prepare proposals for EPU. The critical part of the planning process is to

recognise the project and budget required during the duration of the project period. This action is carried out separately by IAPGs and TWGs in their respective meetings. All Ministries have to conduct a complete test of the feasibility of a suggested new project or the continuation of an ongoing program.

The completed draft plan prepared by EPU is to be submitted to National Development Planning Committee (NDPC), which is the highest policy-making committee for the nation's development planning (EPU, 2004). The NDPC is chaired by the Chief Secretary to the Government. Heads of all economic development ministries, including the Governor of the Central Bank, are members of this committee. The NDPC is in charge for formulating and reviewing all plans for national development and making recommendations on the allocation of resources (EPU, 2004). The approved draft is submitted to a special Cabinet Committee and subsequently tabled in the Cabinet for approval.

Other central agencies do not play a direct role in the development of public policies. For example, MAMPU focuses on managing the utilisation of information and communications technology (ICT), and enhancing work processes and procedures in Ministries. Meanwhile, the Public Services Department (PSD) is the central personnel agency and is therefore concerned with providing necessary personnel support to the Ministries. The Implementation Coordination Unit (ICU) is the central agency for monitoring and coordinating policy implementation. However, for the GTP, PEMANDU will monitor, coordinate, and evaluate all the NKRAs policy implementation. Further, after policies are prepared at the political level by a Ministry or by the Cabinet as a whole, the responsibility of the civil servants is to provide the

required information, recommendation, and share their experience with the Cabinet. Cabinet will then discuss and evaluate such information before recommending a suitable policy.

In this case, individuals, interest groups or NGOs play a rather similar role to political parties with regard to suggesting the views of those concerned with the national public policies agenda. However, interest groups and NGOs tend to be less influential than political parties. These groups regularly complement the efforts of Ministries that actively deal with a range of issues. The media also play a part in the development of public policy by providing information and creating awareness among the public on related issues.

Lastly, individuals can also provide some contribution to the development of public policy by expressing their opinions via specific channels including NGOs, interest groups, political parties, media or departments of various governmental bodies. These channels are called "External Environment".

2.9.4 Policy – Cabinet Approval Process

The Chief Secretary to the Government acts as the Secretary to the Cabinet in Cabinet meetings. He is also responsible to advise any Cabinet decision affecting the public service to the Ministries. Due to this, the Cabinet should ensure that they obtained parliamentary support to the decision made. Parliament is the core decision making body in the governmental system of Malaysia. Also, the Parliament itself acts as a main stakeholder in the process of developing public policies in Malaysia. All documents related to plans or policies by the Government are tabled in the Parliament.

In a typical Parliamentary session, debates on many issues are conducted to list and register views or opinions regarding the weaknesses of particular policies and programs. Concerns raised in these sessions can be incorporated into future policies and programs. Political parties, including component parties of the Ruling party, are also the key participants in the policy process. These parties represent various ethnic groups or subgroups, and reflect their own concerns. They create awareness and responsiveness of public needs to their groups and try to make sure that public policies tabled meet those needs.

In a more detailed explanation, a policy will be deputised through legal document. In connection to that, a number of Acts need to be drafted for enforcement reason. In the process of making an Act, some administrative procedures have to be done. After a draft is completed, a memo to the Cabinet known as "recommendation paper" will be arranged by the Chief Secretary to the Cabinet followed by the "Guideline for Preparing the Cabinet Paper and Implementation of the Cabinet Decision". The purpose is to justify the concerned Acts together with some responses or feedbacks from related Ministries, central agencies, and other authoritative departments. Response obtained from this process is the key to guide the Cabinet before making a significant decision. This proposal draft is set earlier than the Parliament session, regularly one month before the session begins. Figure 2.14 shows the general process in the "Decision Maker Environment".

The preparation of the draft indicates that some parts of the current law will be modified. Once the suggestion is collected, the related Minister then gives endorsement to forward the memorandum and proposal draft to the Cabinet's weekly

meeting after receiving approval from the Cabinet Secretariat. This Cabinet Secretariat consists of the Cabinet, Constitution, Inter-Government Relation Division, Prime Minister Department headed by the Chief Secretary to the Government, who is also the Head of the Government Civil Service.
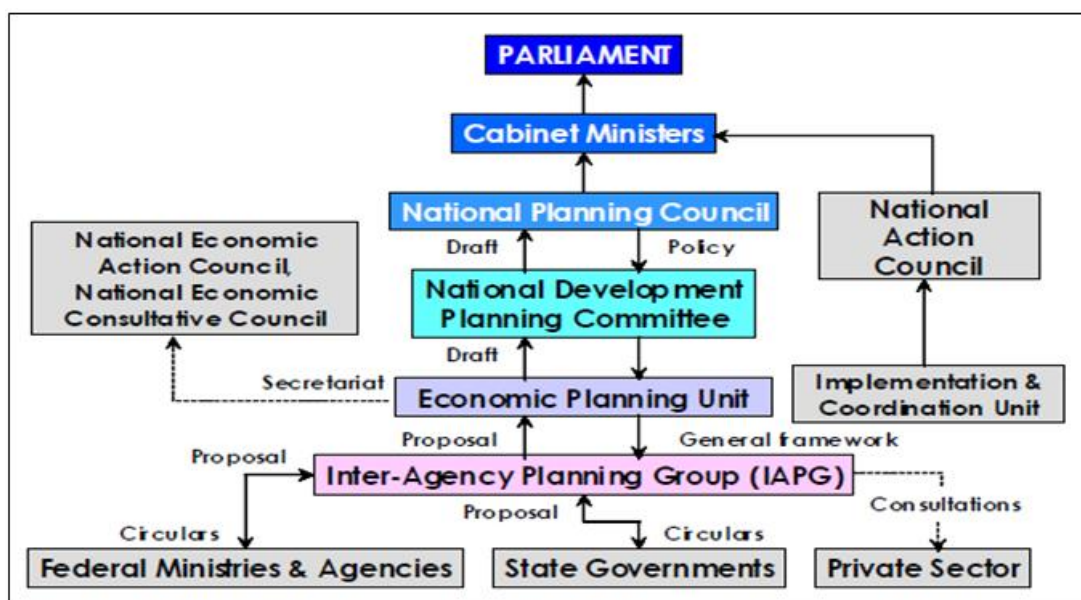
Figure 2.44. Decision maker environment process
Source: Adopted from EPU (2004)

When Cabinet has accepted and approved the proposal, the decision will be passed on to the related Ministry. The related Ministry proceeds to get a Notice of Presentation on the proposal to the House of Representative (Members of Parliament) and the Senate for discussion, debate, and finally to be approved during the Parliament Session. These processes take several days. After the proposal is approved and endorsed by both houses (it should receive more than 2/3 of MPs vote), it will then be submitted to the King for the Royal Assent. The proposal becomes law after being gazetted. Finally, the decision will be conveyed administratively to related parties and through several high-level government meetings.

2.9.5 Public Policy Formulation Process and limitation

The social and political structures in Malaysia are directly related to the planning and formulating of public policy. In addition, Malaysian community is multi-ethnic: Malay, Chinese, Indian, and other minorities. Therefore, many factors such as politics, social, and economy have to be carefully considered before implementing public policy formulation in order to prevent any dissatisfaction among the general public. Formulation of public policy is a complex process due to participation of various interested organisations during the decision making procedures.

As explained before, public policy formulation can be formed through three approaches. First, political approach; the public policy comes through Cabinet orders or through the suggestion of several political parties. The second approach is an administrative process at the ministerial level. The third approach is the combination of both processes through integrated approach. A Committee will be set up to study the public policy in detail before submitting it to the Cabinet. In general, public policy formulation process in Malaysia undergoes several phases such as problems identification, planning, evaluation, decision, and implementing the appropriate public policy. Based on that, the researcher draws the general overview of public policy formulation process in Malaysia as shown in Figure 2.15.

PHASE 1: PLANNING		PHASE 2: EVALUATION	PHASE 3: DECISION	PHASE 4: IMPLEMENTATION
Setup committee	Economy Planning Unit	Cabinet	Parliament	Government Agency
Deliberation	2. Consider general approach to formulation 3. Review impact and performance of New Economic Policy	Discuss final report	Comment on report	Implement a policy
Working groups drafting details of proposal				
Report			Make a decision	
	Working groups drafting details			
	Prepare draft			
	Final report			

Figure 2.55. General overview of public policy formulation process in Malaysia

In the modern era, public policy planning is crucial due to the complex structure of the society. Moreover, participation from certain target groups is also necessary to provide some inputs in the content of the public policy. In general, three groups are recognised: politicians and Government public administrators, general public, and specific interest groups. The first group is responsible to ensure that the public policy implemented achieve its target. This group comprises the ministers, members of parliament, and high-level government officials. As for the public and special interest group, they should act by forming interest groups to bring forward their ideas, suggestions, and requests for the Government's consideration in public policy formulation.

However, these groups do not really have the influence to formulate a public policy or to play as a major actor. At certain level, interest group movement is able to get a strong public support and backing through their campaigns and activities. These groups can make the policy maker or committee to recognise and understand the

ground problem from a clearer view and ways to resolve the problems. Usually, they use mass media as a tool to express their intention to the Government.

Limitation to the current public policy formulation process is that public cannot participate in some public policy issues. Based on the researcher's knowledge, element to formulate any public policy is the capacity to solicit meaningful information regarding constituent and interest group preferences. Public participation in public policy formulation helps to achieve beneficial outcomes to localized decision making.

Leatherman and Howell (2000) stated the reasons why public participation is required in public policy formulation are: 1) to further democratic values by ensuring the interests of the majority of public are at the forefront of Government decision making, 2) to bring about social change by enacting policy that ensures equal access to services and opportunities across the spectrum of the local population, and 3) to recruit support, obtain legitimacy, and avoid opposition by including public groups and stakeholders in some aspects of the decision making process.

2.10 Discussion on E-government and E-participation in the Context of Malaysia

In Malaysian context, ICT infrastructures developed in supporting EG processes are one of the best. Services delivered with ICT support eases the public to use government services especially the ones included in the seven categories of EG services. If seen from the e-participation aspect, which is the public's involvement in public policy formulation through EG application, it still does not reach the standard stated by UN (2004) from the 3 dimensions of e-information, e-consultation, and e-

decision making. Malaysia has taken only embarked on one dimension, which is e-information that can be seen through myGovernment portal as discussed earlier. This is because these portals only display information on available Government services. The standard of the Internet offerings by the federal ministries is generally very high with regard to the "information" factor.

The wants to researcher point out that access is not to be seen as an end by itself. Above all, it enables further activities that underline the importance of discussing access as a prerequisite for mediated participation in decision making. Access is a key issue in the discussion one-participation but it is not the goal itself. It is something that enables – but also inhibits – further actions. It is important to broaden the discussion by asking questions such as: Are there a multitude of purposes with establishing an infrastructure for access? To what extent and for whom is the access for?

Although the federal Government's current website (myGovernment portal) and websites of various ministries showed new developments, the degree of institutionalisation of the e-participation offerings still has rooms for improvement. The e-community centre component in myGovernment portal can be upgraded to the next level where the public and Government may make decisions regarding public policy formulation together. However, so far, only "polls" to get public votes is implemented. According to researcher's observation of the portal, e-participation concept is not fully implemented, particularly in the process of public policy formulation. Due to this, there exist a gap between EG and public policy formulation

that creates a space for the researcher to conduct a study about e-participation in Malaysia. It also serves as a 'backbone' for future studies.

Looking at the public policy formulation process that is currently being implemented, it is possible for the public to give opinions, suggestions, and ideas to the Government with the support of ICT. The researcher focused on the planning phase of public policy formulation process by creating a suitable framework in order for the public to participate in public policy formulation process on policies created.

2.11 Conclusion

Many e-participation frameworks have been established solely for practitioners' reference. Moreover, those frameworks are based on certain specific condition and environment of study. OECD's (2001) framework on e-participation is widely known and is constituted by Information, Consultation, and Active Participation. UN's e-participation framework (United Nation, 2004) is based on similar dimension but with different names of e-information, e-consultation, and e-decision making. Macintosh (2004) on the basis of this dimension develops three levels of e-participation: e-enabling, e-engaging, and e-empowering. Meanwhile, Tambouris et al. (2007) proposed a "Five-stage top-down and bottom-up" framework that helps in scoping e-participation that focuses on the stages. The Spidergram framework by Rifkin et al. (1988) helps to explain participation as a process and assesses the changes and progress of the programs over time. Phang and Kankanhalli (2008) proposed a framework of ICT exploitation for e-participation. Another framework was proposed by Islam (2008) called e-participation model or 7Ps model. This framework considered socio-economic and technological settings.

However, based on previous researches, e-participation framework that considers socio-technical settings from the Malaysian practice has not yet been done. Most of the frameworks stated above focused on certain environment condition. They do not provide a complete roadmap for the policy makers to proceed with adopting ICT-based participation in their EG initiative. Successful e-participation initiative requires a framework from a specific environment, where the planned initiative is going to be implemented. A small number of researchers did focus on public's participation aspect in public policy development, while several others discussed the broader usage of technology in supporting the democratic and e-participation processes (Coleman & Gøtze, 2001; Phang & Kankanhalli, 2008; Betancourt, 2005).

For a better understanding of the e-participation process, this research produces a collaboration approach for Malaysia's e-participation, an approach to the current public-Government relationship by considering all stakeholders. Finally, based on that suggestion, this research comes up with a framework to enhance the e-participation concept in public policy formulation framework.

The researcher finds it equally important to point out that e-participation is a part of continuous tradition of democratic participation, even if it sometimes is presented as a "new feature" in this process. E-participation is not something that can be isolated from visions, prescribing theories or earlier established ways of participation and procedures of decision-making. E-participation is rather formed in relation between possibilities and restrictions, both in practices and visions.

This chapter has explored the concept of e-participation, which is a subset of e-government initiative processes. E-participation explains the relationship between the Government and public for the certain government processes. This study focuses on revising the public policy formulation framework to enhance the e-participation concept provided by the Malaysian Government for the public via EG initiative. This study also tries to find out the contribution of proper use of Internet and responsive public participation to the success of e-participation.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discusses the methodology or research design of the study. This study is conducting an explanatory research aiming to explore the definition of the problem stated before and to produce clear specification of the problem. In an explanatory research process, broad knowledge is necessary to enable descriptive research, which is the core element of the study. Using inductive approach, numerous observations were conducted in the study, which were then sorted into a concept, or generalisation. The researcher was equipped with knowledge of the abstraction only after the observations were analysed. Figure 3.l demonstrates the overall research approaches.
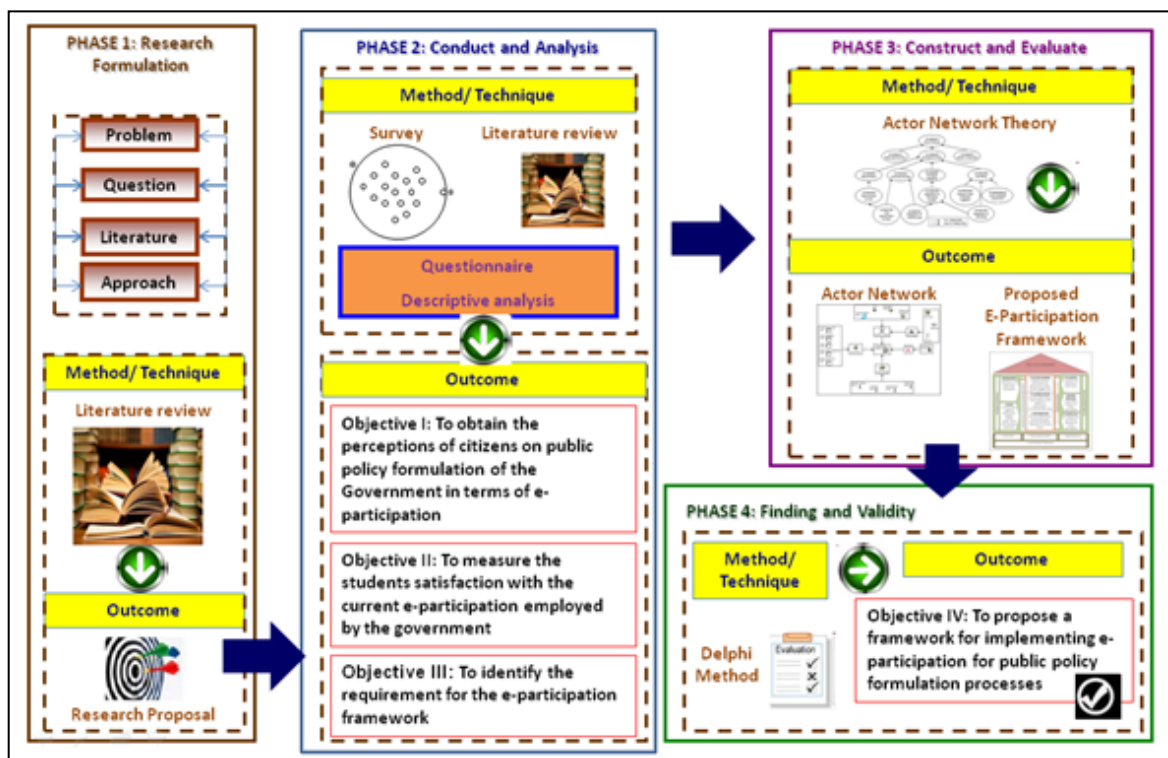
Figure 3.1. Research Design

Table 3.1

Summary of research design

Phases	Method / Technique	Outcome
Phase l: Research formulation	literature review	Proposal

Phase 2: Conduct & Analyse	1. Survey
	   - Questionnaire
	   - Descriptive analysis
	
	2. literature review
		Objective I: To obtain the perceptions of citizens on public policy formulation of the Government in terms of e-participation.
		
		Objective II: To measure students' satisfaction with the current e-participation implementation employed by the Government.
		
		Objective III: To identify the requirement for the e-participation framework.

Phase 3: Construct & Evaluate	Actor Network Theory (ANT)	**Objective IV**: To propose a framework for implementing e-participation for public policy formulation processes.
Phase 4: Finding & Validate	Delphi Method	

3.2 Research Approach

Systematic research is the most appropriate means to investigate facts and ideas, to gain new knowledge and to interpret events. Trends and tendencies can be established which help to predict future needs. Moreover, it is the most important way forward for development and revitalization in modern times (Alashari, 2007). According to

Mertens (2009), research is one of many different ways of knowing and understanding.

Research is conducted according to rigorous and systematic standards. This implies that the work proceeds with specific steps which are set according to the principles of systematic inquiry. The steps are as follows: to identify the research problem and design the tools for data collection, to proceed through analysis and discussion, and carry on until the study arrives at its recommendations. All of this is done impersonally and without bias (Alassaf, l998).

This research will use mixed-methods research approach to address its research questions. Many researchers agree on the advantages of using mixed-methods approach within a single study (Aldridge & Fraser, 2000). For these reasons, the research strategy used is deemed as the most appropriate and therefore selected to guide this inquiry. This is also the most appropriate method to obtain data that can be used to get in-depth interpretation of students' perception on public participation. Justification for using this methodology comes from two sources: the efficacy of the methodology established by prior researches conducted in this field of study, and the belief that purely qualitative or quantitative research methodology would not enable the researcher to adequately address the overall purpose of the study.

A combination of qualitative and quantitative methods is common in methodological triangulation (Williamson, 2005). The aim of triangulation is to discover something that would have been missed if only a qualitative or a quantitative approach had been applied (Modell, 2005). Hence, by utilizing both methods, a more sophisticated rigor

is achieved in the research process (Williamson, 2005). Completeness in the understanding of the concept under investigation can also be accomplished (Halcomb & Andrew, 2005).

As noted by Johnson and Onwuegbuzie (2004), the mixed-methods research approach is an attempt to legitimate the use of multiple approaches in answering research questions, rather than restricting or constraining researchers' choices. It is an expansive and creative form of research, not a limiting form of research. Qualitative and quantitative researches, when used together, produce a more complete knowledge necessary to inform theory and practice (Johnson & Onwuegbuzie, 2004). A mixed method is a valid approach to research, and holds equal weight with focused pure quantitative or pure qualitative methods (Bazeley, 2004).

The efficacy of mixed-method research methodologies, particularly for investigating students' perceptions, has been established by many researchers in the field (lebec & luft, 2007; Tynan & Colbran, 2006). According to Ivankova, Creswell and Stick (2006), a mixed-method approach can help researchers conduct their research with clean designs and more rigorous procedures and ultimately, produce more meaningful study outcomes. This is particularly so in studies such as this where using solely a quantitative or qualitative methodology would be insufficient to provide outcomes that would meet the overall purpose of a study (McMillan & Schumacher, 20l0). McMillan and Schumacher (20l0) also emphasized that mixed-method designs are very helpful in identifying issues, factors and relevant questions that can become the focus of quantitative studies.

3.2.1 Participant

This research adopted descriptive survey research design to elicit students' perception on participation in public policy formulation. In selecting the study's respondents which consist of Malaysia's IHl student population, the researcher used statistics published by Minister of Higher Education (Students Admission to Institutions of Higher Education, Year 2002 – 2007). Based on the list, the researcher used simple sampling technique to select the respondents. According to the statistics, there are l28,839 students enrolled to public institute of higher learning.

Cohen and Manion (l995) stated that there are many writers arguing on the difficulty of determining the appropriate and optimum size of a sample. They added that the correct sample size depends on the nature of the population and the purpose of the study. Nwana (l988) highlighted that "the larger a sample is, the more representative of the population it becomes and so the more reliable and valid the results based on it will become". So, it is better to have a sample as large as possible in order to reach general conclusion.

From this point of view, Van Meter (l990) suggested two key factors to determine the sample size for a study: l) the degree of accuracy the researchers require for the sample, and 2) the extent to which there is variation in the population with regards to the key characteristics of the study. There are many ways of determining the appropriate sample size to achieve a representative sample for a given population, for example using the guide table.

In this research, the researcher used the guide table as a reference. It is designed to help researchers to identify the valid representative sample size for a population. After obtaining the students admission statistics as stated before, the researcher used a simple random sample formula for determining the respondents sample size as below:

Sample size = 0.25 x (certainty factor/acceptable error)^2 x 100

The certainty factor denotes how certain the researcher wants the data sampled will not include variations that do not naturally exist in the population. Table 3.2 shows some commonly used certainty factors.

Table 3.2:

Desired certainty and certainty factors

Desired certainty	Certainty factor
95%	1.960
90%	1.645
80%	1.281

For this research, the researcher used 95% certainty to calculate the sample size, as the following:

Sample size   =   0.25 x (1.960/0.5)^2 x 100

                 =   384 respondents

The benefits of using a simple random sample include its effectiveness in generating representative sample size and the greater precision of survey estimates compared to other methods.

3.2.2 Questionnaire Development

Before applying any research instrument, it is necessary to ensure that it is a valid and reliable tool. In this study, the researcher decided to conduct a preliminary field testing of the questionnaire. According to Bradburn (1988), the main objective of implementing a pilot study is it can be used to indicate questions that need revision (due to various reasons) or can be eliminated. To this end, Oppenheim (1992) expressed that questionnaires have to be composed and tried out, improved and then tried out again, often several times over, until researchers are certain that they can do the job for which they are needed. This view is supported by Bellet al. (1998). They opined that data-gathering instruments should be piloted to test how long it takes the recipients to complete them, to check that all questions and instructions are clear, and to remove any items that do not produce usable data.

In this research, the initial study was conducted using questionnaires. A survey was carried out from January 2010 until March 2010. The objective of this questionnaire was to get a general picture about the assumption, understanding, and readiness of the respondents to the public policy formulation process. The results will shed some information on the current state of awareness, commitment, and students' involvement in public policy formulation process. Moreover, the results will provide an understanding of the specific criteria to be considered in public formulation process framework, which most likely will contribute to continuous trust and loyalty of surveyed respondents.

The formulation of the questionnaire was inspired by the work in United Nations (2005), Smith (2003), and MOMENTUM project. The MOMENTUM project's aim

was to evaluate the impact of e-participation projects on behalf of the European Commission (EC) (Charalabidis et al., 2009). Some questions in the questionnaire were developed based on the study by The Merdeka Center Youth Survey that found a complex picture in the sense of self and community awareness among the Malaysian young adults. The aim of this study was to investigate youth participations in civic organisations in the Klang Valley. Moreover, this study was developed to discover fundamental aspect of e-participation and to obtain ideas about the way to develop a framework of students' participation in public policy formulation process.

The respondents of this study are students. All respondents in the study were requested to complete a questionnaire. To enhance the reliability of the study, the researcher himself explained the objective of the questionnaire, and also definitions and meanings of some terms included in the questionnaire. A pilot test for the questionnaire was conducted and a discussion was conducted with several experts in the public policy formulation process field regarding the results of the pilot study.

The questionnaire was divided into four main parts namely respondents' demographics, citizens' participation in public policy formulation, e-participation and its related aspects, and Internet usage. Completed questionnaires were analysed to meet the objective of the research, which is to study citizens' perception towards participation in public policy formulation in Malaysia. For the purpose of this study, all 36 questions posed in the questionnaire were designed by using likert scale and close-ended (see Appendix A). For close-ended questions, responses were easily converted into numerical values and statistical analysis can be obtained (Yin, 2003).

Respondents were asked to fill in a questionnaire with single or multiple-choice questions.

3.2.3 Pilot Test

A pilot test for the questionnaire was used to determine whether the respondents understood the actual questions/statements or not. The pilot test questionnaire served to determine the most relevant questions in the final study questionnaire. Prior to the distribution of questionnaires to the respondents, they have to be reviewed by the experts for dry run test. Permissions were requested from organisations or stakeholders to conduct this research.

After the draft questionnaire has been developed, the researcher used a pilot study to provide a better knowledge of the problem being studied and its dimensions. A number of researchers recommended conducting pilot studies (Lebec and Luft, 1997; Alashari, 2007). In particular, according to Bell (l993), "All data-gathering should be piloted... to check that all questions and instructions are clear and to enable you to remove any items which don't yield usable data". Hence, the purpose of the pilot study is to choose the best format for the study before proceeding to implement the main instrument.

Pilot studies generally offer tests for the validity and reliability of instruments to ensure that they are suitable to be used by the respondents, and to discover if there are any difficulties in answering the questionnaire or whether the tool requires any adjustments, as well as to predict adequate time for respondents to answer the items. Carrying out such a pilot for the study gave the researcher confidence in the tool,

allowing time to reduce errors and produce a concise questionnaire. This pilot study was conducted on a small sample of respondents who were randomly selected and the total number was ten from each university.

Hence, it can be deduced that however well designed a questionnaire may seem to be, it should always be piloted to ensure relevance, objectivity and effectiveness. In July 2009, l5 students were selected from Universiti Tun Hussein Onn Malaysia to answer the questionnaires. Two public policy experts gave feedbacks on the structure of the questionnaires. Analysis of this pre-test resulted in the elimination of certain questions and the refinement of others. The experts were asked to review and comment on the instructions, content and format of the questionnaire. Both recommended some refinement to the questionnaire. Individual questions were redrafted and the questionnaire was remodelled into its final form. Items that were irrelevant to the study were eliminated.

The participants were almost unanimous in agreeing that the survey was too long. They suggested combining some questions and eliminating others. All suggestions were carefully reviewed and the questionnaire was revised. Finally, the length of the questionnaire was lessened from 39 to 36 questions (Appendix A). By December 2009, the reconstructed and revised questionnaire was ready to be administered. The main field work was conducted by the researcher from January until March 2010.

3.2.4 Data Collection

The questionnaires were distributed and collected online. It is a more reliable approach to collecting data when compared to paper-based methods (Trinidad et al.,

2005). The online questionnaire was conducted using software called lime Survey. The researcher applied the online questionnaire system with a cover letter that provided a brief description of the study, research objective, a request to participate, an explanation of what was required of participants, and a statement of appreciation for their cooperation (Appendix A) at the front page. After completing the questionnaire, each respondent need to click 'Submit' at the end of the questionnaire. Finally, the collected questionnaires were analysed by the researcher.

There were 6l7 Malaysian students from several public universities participated in this study. However after the data cleaning process, only 536 respondents are valid for the analysis. The rest (8l respondents) are considered not valid because of missing data. There were no incentives given to entice participation in this study. The final usable response rate was 57.8% (n=3l0) male and 42.2% (n=226) female.

The information gathered during the data collection process will be presented using appropriate graphical and tabular means. Mouton & Marais (200l) stated that "analysis is understood to mean the resolution of a complex whole into parts, which has an interpretative dimension of explanation in the social science, even though the interpretation eventually presents an indication of the manner in which the events may be understood as a process of resolution and that it is relatively easily accomplished when existing theory is used as a form of reference". Data analysis was designed to establish frequencies and correlation of findings. The data analysis was carried out using Statistical Program for Social Science (SPSS) version l8.0 software. The data gathered were coded and arranged in a manner that can be easily understood. The study's findings were also adequately stated.

3.2.5 Data Analysis

This study utilized quantitative data collected from the questionnaire. The available data were recorded and imported into SPSS before analysis was done. Descriptive analysis, such as frequency distributions, were utilized to provide a profile of the respondents and their demographical characteristics. In addition, mean and standard deviations were initially produced to investigate overall perceptions of students. A Chi-square test was also utilized to check relationships that exist in the study.

3.3 Framework Development

The objective of this research is "to propose a framework for implementing e-participation for public policy formulation processes". The researcher used a specific set of methods and techniques to achieve the objective.

To develop e-participation implementation framework in socio-technical setting, the researcher included Actor Network Theory (ANT) as a central part of this study. ANT is developed by three social theorists namely Bruno latour, Michel Callon, and John law in l980s as a recognition that actors build networks combining technical and social elements (Stanforth, 2006). The characteristic of ANT to networks is to dissolve any dualistic distinctions between 'society' and 'nature' in the construction of network, or between 'the social' and 'the technical', or between 'human' and 'non-human', or between the 'inside' and the 'outside' of the network (Latour, l993). Law (2004) defined ANT as "an approach to socio-technical analysis that treats entity and materiality as enacted and relational effect and explores the configuration and reconfiguration of those relations".

ANT views the world in term of heterogeneous network of actors, both human and non-human. This symmetrical treatment of both human and non-human actors (Callon, 1986) allows the researcher to look at the process as the meshing of humans and technology. This is the process of society and technical setting, which leads to the stabilisation of a strong network (Latour, l993). Even though ANT was widely utilized in exploring phenomena that are not related to information system (IS) studies, among the most relevant researches in this field include those conducted by Monteiro and Hanseth (l995), Hanseth and Braa (l998), Monteiro (2000), Mitev (2000), and Hanseth (2004) who used ANT as a framework for analysing the information infrastructures of large organisations. In general, ANT has been received well by the IS community (Karsten, 2000), even though Jones (l998) criticised ANT for attributing human capabilities to technology.

There are several justifications on why the researcher chose ANT as the theoretical framework. Firstly, it offers a better framework view to the heterogeneous nature of citizen participation in policy making process with IS implementation (Cressman, 2009). Secondly, it has been successfully applied in similar research settings in the past (Stanforth, 2006; Aykac et al., 2007; and Cawood and Simpson, 2000). Thirdly, the researcher personally found out that the fundamental theory to be interesting.

Comparisons and discussions about ANT and other theories suitable for IS research can be found in studies by Tatnall and Burgess (2002), and Ljungberg et al. (2008). This is because in the practice of ANT, the theory offers symmetrical treatment of heterogeneous elements. Therefore, both actors (human and non-human) should be

evaluated as part of the same heterogeneous network instead of separate networks. The researcher presents the concept of ANT as depicted below.

ANT is based on numerous key concepts. These key concepts can be found in Callon (l986), Atkinson (2002), and Sarker et al. (2006). The key concepts used in ANT are as follows:

i) Actor/Actant

Callon and latour (l986) described actor as "any element which bends space around itself, makes other elements dependent upon it, and translates their will into the language of its own". Basically, actors are "entities that do things" (Latour, l993). Examples of actors include humans, group of humans, texts, graphical representations, and technical artefacts. All actors have their own interests; they will try to convince other actors so as to create an alignment of the other actors' interests with their own interests (Callon, l986). When this convincing process becomes successful, it results in the creation of Actor Network (Callon and Latour, l981).

ii) Actor Network

Actor Network is a set of relations in which an actor constantly influences other actors (Callon, l986). Walsham and Sahay (l999) noted that it is a heterogeneous network of aligned interests, including people, organisations, and standards.

iii) Translation

Translation is the creation and alignment of the interests in Actor Network. This process consists of four major stages: problematisation, interessement, enrolment, and

mobilisation. Several actors within an organisation may be concerned in a different process. Each actor is with its own unique characteristics and outcomes. For clarity, it is useful to focus on a single actor, from whose vantage point we wish to see the process of translation (Callon, l986).

iv) Problematisation

Problematisation is the first process of translation during which an actor defines identities and interests of other actors that are consistent with its own interests, and establishes itself as an obligatory passage point (OPP) (Callon, l986).

v) Obligatory Passage Point (OPP)

Generally, obligatory passage point (OPP) refers to a situation that has to occur in order for all actors to satisfy the interests that have been attributed to them by the focal actor. The focal actor defines the OPP through which the other actors must pass through and by which the focal actor becomes indispensable (Callon, l986). In other words, the focal actor identifies the interests of other actors that are consistent with its interests.

vi) Interessement

It involves a process of convincing other actors to accept and recognise definition of the focal actor (Callon, l986). It is the actions by which the focal actor attempts to impose and stabilise the identity of the other actors it defines through problematisation.

vii) Enrolment

Enrolment is the third process of translation, where other actors in the network accept (or get aligned to) interests defined for them by the focal actor (Callon, l986) or when other actor accepts the roles defined for them by the focal actor.

viii) Mobilisation

Mobilisation involves maintaining commitment to a cause of action and the OPP.

To summarise, the main research focus of this study is to develop an e-participation framework in a socio-technical setting. This is done firstly by looking at the organisation as it exists prior to the process of policy making. Secondly, analysing the policy making process, and thirdly, looking at the established e-participation framework and tools after the e-participation implementation. ANT is used to find and analyse the main events and phases of the implementation and the human and non-human actors that play a part in them. Based on this analysis, the themes and issues that arise can be used to interpret other e-participation implementation as well.

3.3.1 Framework Evaluation

The suggested e-participation framework was evaluated using Delphi method. Delphi method focuses on finding a consensus between the experts identified by the researcher. Delphi method is a broadly used and accepted method for gathering data from the respondents within their domain of expertise (Hsu & Sandford, 2007). This method is designed for the communication process group who is trying to search for an opinion or judgment upon a particular issue.

Theoretically, the Delphi method is well-suited as a technique for consensus-building by using a series of questionnaires produced through multiple iterations from the collected data provided by the selected subjects (Hsu and Sandford, 2007). However, Hsu and Sandford (2007) pointed out that three iterations are often sufficient for necessary information to reach an agreement in most cases. It is important to take note here that the Delphi method was not intended to test the research model (Nevo and Chan, 2007). The employment of participants from multiple organisations for the Delphi method was just to achieve a more complete set of factors for the analysis.

Beech (1999) explained that Delphi method "…uses rounds of written questionnaires and guaranteed anonymity with summarised information and controlled feedback to produce a group consensus on an issue" (Beech, 1999). Van Zolingen and Klaassen (2003) stated that this method is developed as a qualitative, long-range forecasting technique that elicits, refines, and draws upon the collective opinion and expertise from a panel of experts.

Faucher, Everett, and Lawson (2008) described Delphi method as a group technique aimed to obtaining the most reliable consensus of opinion from a sample of experts, by using a series of intensive questionnaires within the controlled feedback process. Landeta (2006) stated that Delphi method is flexible and simple to execute as it also provides a convenient solution to manage a group of experts who are located all around the world working in different time zones without a problem when trying to arrange for direct interactions. Delphi method is also particularly useful for long-range forecasting studies (20-30 years) as the expert opinions are the main source of available information (van Zolingen and Klaassen, 2003).

After the effect of fashion or novelty that had been overcome, the Delphi method was finally accepted by the scientific community as a valid research technique (landeta, 2006). Gupta and Clarke (l996) reported a very broad application of the Delphi method used in business, education, health care, real estate, engineering, environment, social science, tourism, and transportations.

As mentioned by Czinkota and Ronkainen (2005), this method has also been applied to the fields of library, information science, and communications studies. Delphi method has also been conducted in tourism, product management, and organisational policy (Landeta, 2006), education studies (van Zolingen and Klaassen, 2003), e-commerce (Addison, 2003), internet banking (Bradley and Stewart, 2003), international business (Czinkota and Ronkainen, 2005), and – more closely related to this study – knowledge management (Scholl, et al. 2004).

Based on Delbecq, Van de Ven, and Gustafson (l975), Delphi method can be used to achieve the following objectives:

1.   To determine or develop a range of possible alternative programme;

2.   To explore or expose underlying assumptions or information leading to different judgements;

3.   To seek out information that may generate a consensus on the part of the respondent group;

4.   To correlate informed judgements on a topic spanning a wide range of disciplines, and;

5.   To educate the respondent group about the diverse and interrelated aspects of the topic.

The Delphi method offers a possible way of reaching consensus around clusters of ideas, potentially providing insights into some integrative solutions. As suggested by Linstone and Turoff (l975), the Delphi studies are more useful when "the problem does not lend itself to precise analytical techniques but can benefit from subjective judgements on a collective basis." Czinkota and Ronkainen (2005) reported that informed consensus is more likely to indicate future directions of a field than the opinions gathered from many uninformed survey participants. Individuals selected for this Delphi study were all experts in fields relevant to the concept of knowledge for the subject matters.

There are four main types of Delphi method that are widely known in the literature: classical Delphi (used for forecasting), policy Delphi (used for policy development), decision Delphi (used for decision-making), and hybrid Delphi (using any mixture of the three preceding types). These types of Delphi method used to be traditionally conducted by mail, but are gradually being administered via electronic communication, which provides a shorter time between rounds (Zipfinger, 2007), as well as lessening the researcher's work.

The Delphi method is usually round-based, which is mostly due to the fact that the data need to be analysed and a feedback needs to be prepared for the next round; however, there is a new type of computer-aided Delphi that allows for a round-less Delphi, as has been conducted by Gordon and Pease (2006). The panellists are then presented with real-time feedback, which can be problematic as they may not receive the same data. A more detailed comparison of different Delphi methods are provided

by Rauch (1991), van Zolingen and Klassen (2003), and Zipfinger (2007). Table 5.1

provides a comparative summary of these three approaches.

Table 3.3

Comparisons of Classical, Policy, and Decision Delphi

	Classical Delphi	**Policy Delphi**	**Decision Delphi**
The context is that……	Reality is given; its interpretation is clear; and consequences are discussed	Reality is given; its interpretation will be discussed	Reality will be created
The aim is to…	Produce forecasts	Produce policy	Produce decisions
The aim is achieved by…	Creating a consensus	Defining and differentiating views	Preparing and supporting decisions
The procedure focuses on…	Facts	Ideas and concepts	Decisions
The panellists are…	Unbiased experts	lobbyists	Decision makers
The panellists try to…	Obtain realistic statement and prognoses	Support and succeed in their standpoints	Create a basis for realistic and useful decisions
The participation has to…	Be high in absolute terms (i.e.: many experts)	Consider all relevant groupings	Cover a high percentage of the relevant decision makers
The researcher tries to…	Arrive at a stability among responses	Structure conflicts	Arrive at a stability among decisions
The feedback serves for…	Obtaining the realistic answer or prognosis	Getting well-defined group opinions	Stimulating and informing the decision makers
Anonymity means that…	The participation in the panel is not known and all answers are anonymous		The participation is known at the start, but answers are anonymous
The reason for the anonymity is to…	Hinder arrangements and personal influences	Facilitate extreme viewpoints and objectivity	Support personal answers and raise the participation
The strict objectivity of the evaluation mainly has…	Methodological reasons (to be unbiased)	Pragmatic reasons (to get a complete picture)	Ethical reasons (the director of the study must not influence the decision process)

Source: Adapted from Rauch (1991) and Zipfinger (2007).

There are other types of Delphi that can be found in the literature including EFTE Delphi (Estimate, Feedback, Talk, Estimate; see Nelms and Porte, l985), which allows a group discussions in between rounds, and conversational Delphi, which replaces the questionnaires with interviews (see Mitchell, l99l). In order to improve the first questionnaire, they have proposed that interviews are to be conducted before the first round (Hill and Fowles, l975; Mitchell, l99l).

These modifications of the Delphi method are introduced using a face-to-face manner. Although this can bring out more information and ensure a better understanding of the questions at hand, it can also be seen as a trade-off, as it will become more time consuming (and may therefore be more expensive). There is also a problem with the face-to-face method especially in dealing with experts who are scattered around the globe; it depends on the nature of the study and the experts themselves as it may also be impossible to get them involved in the face-to-face activity (Mitchell, 1991).

3.4 Conclusion

In summary, the main research focus of this study is to develop an e-participation framework in socio-technical setting. This is done firstly by looking at the organisation as it is prior to the process of policy making. Secondly, the policy making process was analysed. ANT was used to find and analyse the main events, implementation phases, and the human and non-human actors that play a part in them. Based on this analysis, the themes and issues that arise can be used to interpret other e-participation implementation as well. Thirdly, the established e-participation framework and tools will be evaluated in the construct and evaluate process. . The research instrument, which is questionnaire, was distributed to a sample of relevant

individuals. Then, statistical analysis was conducted and results were evaluated. Finally, the framework was evaluated by Delphi method and conclusions were drawn from the analysis.

CHAPTER FOUR
STUDENTS' PERCEPTION TOWARDS PARTICIPATION IN
PUBLIC POLICY FORMULATION PROCESS

4.1 Introduction

As mentioned earlier, there were three main objectives in this study. This chapter is discussing the first and second objectives, which is to study students' perception towards participation in public policy formulation in Malaysia and to measure students' satisfaction with the current e-participation implementation employed by the Government. The finding of this objective is important as they would be used in considering whether to support the development of e-participation framework or not. As mentioned in the research question (Chapter 1), the researcher needed to obtain feedbacks and responses on students' perception and satisfaction – whether they support the e-participation framework drafted.

4.2 Study Findings

A total of six hundreds and seventeen (617) Malaysian students from several institutes of higher learning (IHL) participated in this study. However after the data cleaning process, only 536 respondents are valid for analysis. The remaining 81 respondents' answer scripts are not included due to incomplete answers. The researcher used convenience and random sampling for the selection of institutes of higher learning (IHL), and random sampling for selection of student within the selected IHL. There are three IHL that were selected by the researcher namely Universiti Tun Hussein Onn Malaysia (UTHM), Politeknik Port Dickson and Universiti Teknikal Malaysia Melaka (UTeM). These IHL were selected because staffs there volunteered to assist in term of questionnaire administration and collection. After the IHL were selected, the

researcher then chooses one faculty or department for every IHL. Then the researcher

contacts a person in charge at that faculty to promote the questionnaire online address

to their student via their Facebook page, email and all online platforms.

The researcher adopted this technique because the population for this research is too

large and it is impossible to include every individual. This is the reason why the

researcher used convenience sampling technique. The researcher prefers this sampling

technique because it is fast, inexpensive, easy and the subjects are readily available.

This technique also has other advantages aside from stated above. For example,

convenience sample is usually used in pilot studies because it allows the researcher to

obtain basic data and trends regarding the research without the complications of using

a randomized sample. This sampling technique is also useful in documenting a

particular quality of a substance or phenomenon occurring within a given sample.

Given below is the demographic profile of the study's respondents.

Table 4.1

Respondents' demography

Q33: Gender		Frequency	Percent
Valid	Male	310	57.8
	Female	226	42.2
	Total	536	100.0
Q34: Age			
Valid	18 - 30 years	416	77.6
	31 – 40 years	110	20.5
	41 – 50 years	10	1.9
	Total	536	100.0

Q35: Race			
Valid	Malay	488	91.0
	Chinese	26	4.9
	Indian	8	1.5
	Others	14	2.6
	Total	536	100.0
Q36: Academic qualification			
Valid	Diploma	114	21.3
	Bachelor Degree	302	56.3
	Master Degree	114	21.3
	Doctor of Philosophy (PhD)	6	1.1
	Total	536	100.0

Based on the demography data above, there are 310 male respondents (57.8%) and 226 female respondents (42.2%). Majority of the respondents' age ranged around 18 - 30 years old which accounts for 77.6% of all respondents. Majority of the respondents (488 persons or 91%) is Malay. In terms of respondents' education level, bachelor degree made up the largest percentage with 56.3%, master degree with 21.3%, diploma with 21.3%, and followed by PhD with 1.1%. These indicate that the findings represented opinions from different levels of respondents in term of education level, as shown in Table 4.1 above.

4.3 Perception about Participation in Government Policy Formulation

Public participation is often considered as the next step of democracy. It is notable that there are some differences in the ways people participate in the process of public policy formulation. Therefore, the questionnaire was meant to test if those differences are extension of their perceptions towards e-participation. The similarities and

differences discovered were reported. Next section discusses respondents' experience with e-participation and how that experience influences their feelings about it.

One important finding of this survey is that despite the apparent differences in interests and attitudes, majority of the respondents shared similar concerns. The percentage of respondents who are not concerned with the public policy formulation was only 3%; 31% of respondents were between concerned and not; and the remaining 66% concerned with the process. The findings from survey questions numbered Q2, Q3, Q5, Ql5, and Q22 showed that the respondents were concerned about public policy formed by the Government as shown in Table 4.2.

Table 4.2

Respondents' concern about public policy formulation

Q2: How concerned are you about the public policy formulation in Malaysia?		Frequency	Percent
Valid	Very concern	116	21.6
	Concern	238	44.4
	Between concern and not	166	31.0
	Not concern	10	1.9
	Very not concern	6	1.1
	Total	536	100.0
Q3: When you know a public policy has been formulated, have you taken any actions to know that policy?			
Valid	Yes	466	86.9
	No	70	13.1
	Total	536	100.0

Q5: How frequently do you discuss public or government policies or current issues with your family members/friends/schoolmates or colleagues?		
Valid Several time a week	180	33.6
Once a week	118	22.0
Once a month	108	20.1
Rarely	122	22.8
Never	8	1.5
Total	536	100.0
Ql5: Do you have any feeling 'want with it' in yourself on public policy formulation process?		
Valid Yes	440	82.1
No	38	7.1
Uncertain	58	10.8
Total	536	100.0
Q22: Have you contributed an opinion / view such as vote (poll) in myGovernment portal?		
Valid Yes	272	50.7
No	264	49.3
Total	536	100.0

From the participation aspect, majority of the respondents claimed that they never participated in any public policy formulation process. Only 12.7% of them took part in the process. From the voicing of opinion aspect, most respondents took part through certain methods as presented in Table 4.3 and Figure 4.1 below.

Table 4.3

Respondent participation in public policy formulation process

Q4: Have you participated in any process of public policy formulation before?	Frequency	Percent
Valid Yes	68	12.7
No	468	87.3
Total	536	100.0
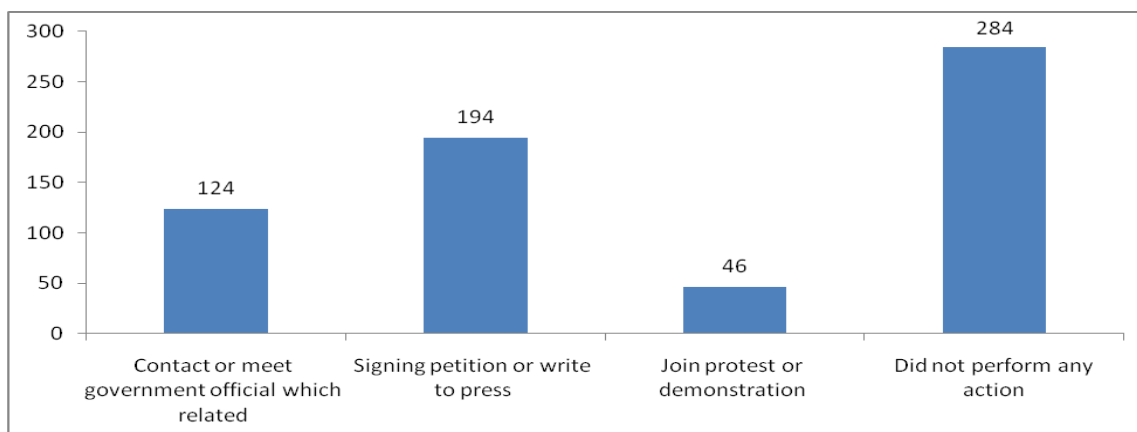
Figure 4.1. Respondents' voicing of opinion

In term of the importance of participation in public policy formulation, majority of the respondents stated that it was very important and significant. Only 1.5% of them stated otherwise, as shown in Table 4.4 below. This was due to 87.7% of the respondents assumed that the benefits of public policy formulation would eventually come back to them.

Table 4.4

The importance and benefit of public participation

Q7: To what extent do you think that citizen participation in public policy formulation is important?	Frequency	Percent
Valid Very important	310	57.8
Fairly important	102	19.0
Important	116	21.6
Not important	6	1.1
Very not important	2	0.4
Total	536	100.0
Ql8: Do people benefit through their participation in public policy formulation?		
Valid Yes	470	87.7
No	16	3.0
Uncertain	50	9.3
Total	536	100.0

In terms of whether Malaysian students are eligible to participate in public policy formulation process or not, 92.9% of the respondents strongly agreed that all students possess the rights to participate in public policy formulation process while the remaining stated otherwise.

Table 4.5

Respondents' perception towards participation in public policy formulation process

Q9: As a Malaysian, are you eligible to be involved in formulating a public policy?	Frequency	Percent
Valid Yes	498	92.9
No	38	7.1
Total	536	100.0

Q10: Do government benefit through citizen participation in public policy formulation?		
Valid Yes	468	87.3
No	6	1.1
Uncertain	62	11.6
Total	536	100.0

Q11: Are you satisfied with public policy that has been formulated without citizens' participation?		
Valid Yes	40	7.5
No	358	66.8
Uncertain	138	25.7
Total	536	100.0

Q12: Do public policy packages that were formulated without participation from the citizens is fair?		
Valid Yes	40	7.5
No	410	76.5
Uncertain	86	16.0
Total	536	100.0

Q16: Does government acquire new views and opinions from citizens in public policy formulation process?		
Valid Yes	510	95.1
No	12	2.2
Uncertain	14	2.6
Total	536	100.0

Q17: Do you feel that you need to participate in public policy formulation because of your responsibility to this country?			
Valid	Yes	406	75.7
	No	60	11.2
	Uncertain	70	13.1
	Total	536	100.0

It is learnt from the questions that most of the respondents opined that the Government would benefit from public participation in the public policy formulation process, with 87.3% respondents stated "Yes" while the rest answered "No" and "Uncertain". This is also supported by other findings that the Government ought to acquire views and opinions from people in public policy formulation process, where 95.1% of them agreed. 75.7% of the respondents also agreed that the existence of sense of responsibility towards the country would foster motivation to participate in public policy formulation process. In accordance to that, 66.8% of the respondents felt dissatisfied and 76.5% of them felt that they were unfairly treated if public policy formulation process does not involve the people. Table 4.5 displays related details.

Respondents of this study stated that they are not satisfied with the country's medium of participation. Based on Q13, in terms of bureaucracy aspect in delivering views and opinions, 65.7% of the respondents agreed that there were some obstacles delivering their views and opinions, and due to that, 67.2% of them claimed that the medium of internal communication to deliver views and opinions was still insufficient. Table 4.6 shows respondents' view on medium of participation. However, the respondents did not specify types of obstacles faced.

Table 4.6

Respondents' view on medium of participation

Q13: Do your effort to convey your opinion or view is blocked by bureaucratic red tape?		Frequency	Percent
Valid	Yes	352	65.7
	No	84	15.7
	Uncertain	100	18.7
	Total	536	100.0
Q14: Is the current communication medium good enough in the process of exchanging opinions or views between government and people?			
Valid	Yes	94	17.5
	No	360	67.2
	Uncertain	82	15.3
	Total	536	100.0

Based on the results' analysis, 75.7% respondents are emphasizing on the importance and necessity of the participation in public policy formulation. This is supported by Kweit and Kweit (2007). They found that participation has a symbolic benefit that may be more important than its instrumental role. However Yang (2006) argued that the reluctance of people for participating in local government matters is relative and strongly depending on their perception of participation. Thus, the investigation of students' perception toward participation is valuable because it gives a unique perspective of their perception.

On the other hand, people's perceptions of participation opportunities are strongly based on their evaluation of policy and performance of the government. Lowndes et al. (2001) pointed out that people will be deterred from participation because of a perception that council, "wouldn't do anything". They added such view or perceptions are often based on their (the people's) experience. People felt that members of the

government departments are prepared to listen to people's opinion but they do what they want (Lowndes et al., 2001). However, Goss (1999), Sergeant, and J. Steele (1999) provided a contradicting perception that the public participation is unfavourable to the government. Meanwhile, Lowndes et al. (2001) stated that one of the most serious problems hindering participation with the local government's policy formulation process is the lack of council response to public's consultation.

4.4 Analysis on E-participation and its Related Aspects

E-participation is often considered the next step of public participation triggered by the Internet technology. Technology is seen both as the means and end of democracy enhancement. According to Becker (1998), technology is very vital for the stimulation of democratic and social processes and the renewal of society. Internet-based technology has, for the past decade, been seen as a panacea for democratic deliberation and the enhancement of participation, and as an important ingredient of technical optimism. Dahl (1999) also expressed far-reaching expectations for the potential of new information and communication technology, stressing that this could help in providing accessibility when people inform themselves about what is on the political agenda. Technology could also simplify consultations in connection with the preparation of decisions, and interactive systems could support deliberative discussions (Dahl, 1999).

Through questionnaires distributed, 85.8% of the respondents agreed that Internet technology is a suitable approach for people to participate in public policy formulation process. Due to this, in keeping with the existence of Malaysian Government Portal (myGovernment), as much as 94% of the respondents agreed that

myGovernment portal is extended to enable people's participation in public policy formulation. Table 4.7 presents related data.

Table 4.7

Respondents' view on Internet approach

Q19: Is Internet a suitable approach for you to join the public policy formulation process?	Frequency	Percent
Valid Yes	460	85.8
No	44	8.2
Uncertain	32	6.0
Total	536	100.0
Q20: In your opinion, do electronic government initiatives need to be expanded to enable you to participate in public policy formulation process?		
Valid Yes	504	94.0
No	10	1.9
Uncertain	22	4.1
Total	536	100.0

However, Internet-based participation requires some desirable criteria. Based on the survey findings, five main criteria have been agreed namely "Trust", "Transparency", "Responsiveness", "Accessibility", and "Secrecy". The results are shown in Figure 4.2 below.
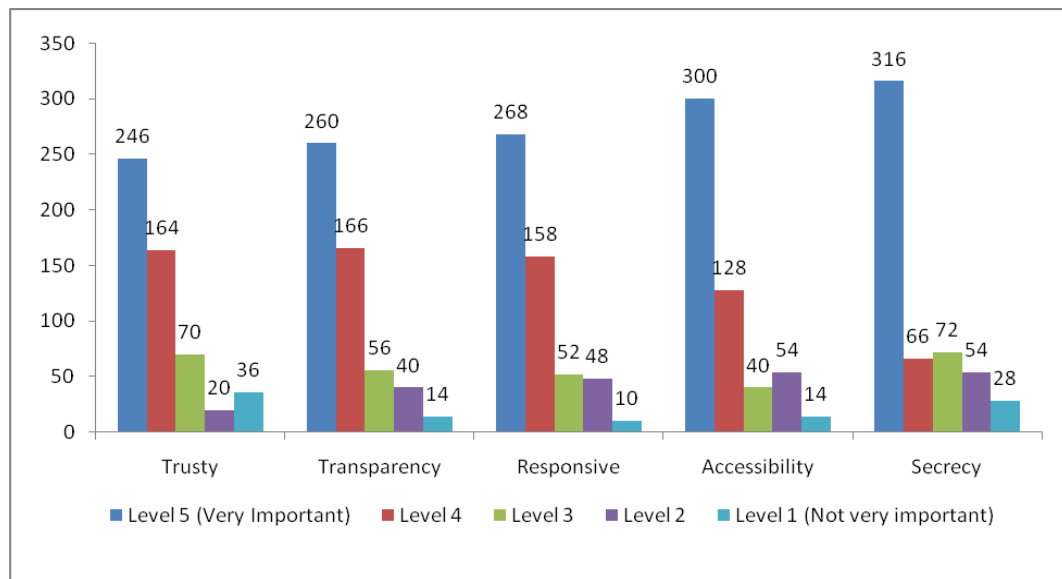
Figure 4.1. Electronic participation (e-participation) criteria that enable people to participate in public policy formulation using Internet according to degree of importance.

Referring to Figure 4.2 above, "Accessibility" is the most crucial criteria because it was selected by 428 respondents (level 4 and 5) followed by "Responsiveness" (426) and "Transparency" (426). Therefore, the researcher suggests that information technology infrastructure has to function well before encouraging people to participate in public policy formulation using the Internet.

The myGoverment portal is not totally effective in terms of vote mechanism (poll) aspect. Only 50.7% of the respondents have participated in voting while the remaining 49.3% have never voted via that portal. This is probably caused by lack of information disseminated or lack of access to the portal. Therefore, if information dissemination and access can be improved, the researcher thinks that people's participation could be enhanced. Table 4.8 shows that 95.5% of the respondents would be satisfied if they can participate in public policy formulation process online.

Table 4.8

Respondents' view on satisfaction in participation in public policy formulation

process online

Q22: Have you contributed an opinion / view such as voting (poll) in myGovernment portal?		Frequency	Percent
Valid	Yes	272	50.7
	No	264	49.3
	Total	536	100.0
Q23: Will you be satisfied if you can participate in public policy formulation process online?			
Valid	Very satisfied	100	18.7
	Fairly satisfied	214	39.9
	Satisfied	198	36.9
	Not satisfied	20	3.7
	Not very satisfied	4	0.7
	Total	536	100.0
Q22: Have you contributed an opinion / view such as vote (poll) in myGovernment portal?			
Valid	Yes	272	50.7
	No	264	49.3
	Total	536	100.0
Q23: Will you be satisfied if you can participate in public policy formulation process online?			
Valid	Very satisfied	100	18.7
	Fairly satisfied	214	39.9
	Satisfied	198	36.9
	Not satisfied	20	3.7
	Not very satisfied	4	0.7
	Total	536	100.0
Q26: Do policy topics attract you to participate in public policy formulation process?			
Valid	Yes	454	84.7
	No	30	5.6
	Uncertain	52	9.7
	Total	536	100.0

In terms of policy aspect, the policy title plays a fundamental role in encouraging people to participate in the public policy formulation process. Based on the survey, 84.7% of the respondents agreed that the title of policy would attract them to get involved in public policy formulation process.

The respondents were also asked about their opinion about the current public participation level and their expectation for the future. From the analysis of the findings, 53% of the respondents thought that current people's participation level is more on "informing", which is in the form of notification or announcement of a policy. However, 92.2% of the respondents expected it to be at "consultation" level in the future, as depicted in Table 4.9.

Table 4.9

Respondents' view on people's participation level

Q24: Based on your opinion, which participation level suits the public policy formulation process currently? (The level of engagement in the process refers to "informing" (lowest level), "consulting" and "decision making" (highest level)).	Frequency	Percent
Valid Informing	284	53.0
Consulting	210	39.2
Decision making	42	7.8
Total	536	100.0
Q25: Based on your opinion, which participation level suits the public policy formulation process? (The level of engagement in the process refers to "informing" (lowest level), "consulting", and "decision making" (highest level)).		
Valid Informing	92	17.2
Consulting	332	61.9
Decision making	112	20.9
Total	536	100.0

Information dissemination and presentation related to the policy should be established through several mechanisms. Majority of the respondents chose three major mechanisms namely local newspaper, government portal, and television. Other mechanisms suggested by respondents were brochure, short messaging system (SMS), telephone, banner, social bookmark sites (Facebook and Twitter) as well as talks by authoritative parties.

4.5 Analysis on Internet Usage

Findings on the Internet usage are important in this study as Internet serves as the best channel to promote people's participation in the public policy formulation process. In rhetorical claims, Internet is often regarded as autonomous and possible to select freely, as well as being the only way to overcome limits of time and place, while securing a multitude of access points to information and decision-making in public policy formulation as well. The Internet is by far the least widely available medium for news dissemination.

The survey found that 61.9% of the respondents accessed the Internet at their workplaces. The rest of them accessed the Internet from their home (35.4%), library or laboratory (1.5%), and cybercafé or public places (1.1%). Most of them used the Internet on the daily basis (59.7%) and this proves that Internet is the main channel to find information particularly about health, current news, career, and communication, as depicted in Table 4.10 below.

Table 4.10

Respondents' view on Internet usage

Q28: Where do you often access the Internet service?		Frequency	Percent
Valid	At workplace	332	61.9
	At home	190	35.4
	At library or laboratory	8	1.5
	At cybercafé or public place	6	1.1
	Total	536	100.0
Q29: How often do you access the Internet?			
Valid	Once a month	4	0.7
	Once a week	24	4.5
	Several times a week	40	7.5
	Every day	320	59.7
	Several times a day	148	27.6
	Total	536	l00.0

In terms of the importance of Internet, 98.5% of the respondents agreed that the Internet was "important" while the remaining claimed that it was "unimportant". Overall, all respondents (100%) have email addresses for communication purposes. The findings are shown in Table 4.11 above.

Table 4.11

Respondents' view on importance of Internet

Q3l How important is Internet in your life?		Frequency	Percent
Valid	Not very important	0	0
	Not important	8	1.5
	Important	200	37.3
	Very Important	328	61.2
	Total	536	100.0

Q32: Do you have an email address?		
Valid Yes	536	100.0

4.6 Students' Perception on Public Policy Formulation in Terms of E-participation

The researcher investigated perceptions of male and female students through the analysis of frequency, mean score, and standard deviation of the responses. Next, the researcher explored whether significant differences in perceptions between male and female exist by utilizing a t-Test or a Chi-square test.

Table 4.12

Chi-square test on Perceptions of Public Policy Concern allocation by gender

GENDER		Public Policy Concern					
		Extremely Concerned	Concerned	Uncertain	Unconcerned	Extremely Unconcerned	Total
MALE	Count	84	144	70	8	4	310
	% within GENDER	27.1%	46.5%	22.6%	2.6%	1.3%	100.0%
	% within CONCERN	72.4%	60.5%	42.2%	80.0%	66.7%	57.8%
	% of Total	15.7%	26.9%	13.1%	1.5%	0.7%	57.8%
FEMALE	Count	32	94	96	2	2	226
	% within GENDER	14.2%	41.6%	42.5%	0.9%	0.9%	100.0%
	% within CONCERN	27.6%	39.5%	57.8%	20.0%	33.3%	42.2%
	% of Total	6.0%	17.5%	17.9%	0.4%	0.4%	42.2%
Total	Count	116	238	166	10	6	536
	% within GENDER	21.6%	44.4%	31.0%	1.9%	1.1%	100.0%
	% within CONCERN	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	21.6%	44.4%	31.0%	1.9%	1.1%	100.0%

(Chi: df=4, χ^2=29.719, p=.000, T-Test: t=60.949, Mean=2.1642, SD=0.03551)

As represented in Table 4.12, the students showed the highest frequency of concern (66.1%) in the public policy concern category. While, 33.9% shows they are

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unconcerned about the public policy. Conversely, the male students reported the highest frequencies (73.6%) in the "extremely concern and concern" category whereas those in the female students reported 55.8%. The Chi-square test revealed that those differences in the students were statistically significant (p=.000). In short, gender had a significant difference influence on the students' perceptions on the evaluator for public policy concern at $p < 0.05$ (Question 21).

Table 4.23

Chi-square test on perceptions of the important of public policy allocation by gender

GENDER		IMPORTANT					Total
		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	
Male	Count	190	62	52	4	2	310
	% within GENDER	61.3%	20.0%	16.8%	1.3%	0.6%	100.0%
	% within IMPORTANT	61.3%	60.8%	44.8%	66.7%	100.0%	57.8%
	% of Total	35.4%	11.6%	9.7%	0.7%	0.4%	57.8%
Female	Count	120	40	64	2	0	226
	% within GENDER	53.1%	17.7%	28.3%	0.9%	0.0%	100.0%
	% within IMPORTANT	38.7%	39.2%	55.2%	33.3%	0.0%	42.2%
	% of Total	22.4%	7.5%	11.9%	0.4%	0.0%	42.2%
Total	Count	310	102	116	6	2	536
	% within GENDER	57.8%	19.0%	21.6%	1.1%	0.4%	100.0%
	% within IMPORTANT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	57.8%	19.0%	21.6%	1.1%	.4%	100.0%

(df=4, χ^2=11.580, p=.021, T-Test: t=44.198, Mean=1.6716, SD=0.87564)

Both genders showed a similar attitude on the importance of public policy formulation (Question 22). Nearly 98.4% of the respondents reported that the public policy is important. Only 1.5% of students agreed that public policy is not important. The Chi-square test identified that there was statistically significant difference between gender and the importance of public policy formulation process at $p < 0.05$.

Table 4.34

*Chi-square test on perceptions of the communication medium of participation in
public policy formulation by gender*

GENDER		MEDIUM			Total
		Yes	No	Uncertain	
Male	Count	38	220	52	3l0
	% within GENDER	12.3%	70.9%	16.8%	100.0%
	% within MEDIUM	40.4%	61.0%	63.4%	57.8%
	% of Total	7.1%	40.9%	9.7%	57.8%
Female	Count	56	140	30	226
	% within GENDER	24.8%	61.9%	13.3%	100.0%
	% within MEDIUM	59.6%	39.0%	36.6%	42.2%
	% of Total	10.5%	26.2%	5.6%	42.2%
Total	Count	94	360	82	536
	% within GENDER	17.6%	67.1%	15.3%	100.0%
	% within MEDIUM	100.0%	100.0%	100.0%	100.0%
	% of Total	17.6%	67.1%	15.3%	100.0%

(df=2, χ^2=14.199, p=.001 T-Test: t=79.887, Mean=1.9776, SD=0.57312)

With regards to the communication medium of participation in public policy
formulation (Question 23), as demonstrated in Table 4.14, 40.9% males and 26.2%
females selected "No" as the highest rank. Next, 7.1% males and l0.5% females
selected "Yes" as the second highest rank. In other words, more than 60% of the
respondents suggested that they did not know the communication medium for public
policy formulation. In addition, the Chi-square test revealed that these differences
between males and females concerning perceptions on the communication medium
were statistically significant at $p < 0.05$.

Table 4.45

Chi-square test on perceptions of the trust criteria to participate in public policy

formulation using Internet by gender

GENDER		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	Total
				TRUST			
Male	Count	20	9	50	102	129	310
	% within GENDER	6.5%	2.9%	16.2%	33.0%	41.4%	100.0%
	% within TRUST	55.6%	47.4%	71.4%	62.2%	52.0%	57.8%
	% of Total	3.7%	1.7%	9.3%	19.1%	23.9%	57.8%
Female	Count	16	10	20	62	118	226
	% within GENDER	7.1%	4.4%	8.8%	27.4%	52.2%	100.0%
	% within TRUST	44.4%	52.6%	28.6%	37.8%	48.0%	42.2%
	% of Total	3.0%	1.9%	3.7%	11.6%	22.1%	42.2%
Total	Count	36	19	70	164	247	536
	% within GENDER	6.7%	3.6%	13.1%	30.7%	46.0%	100.0%
	% within TRUST	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	6.7%	3.6%	13.1%	30.7%	46.0%	100.0%

(df=4, χ^2=10.903, p=.028, T-Test: t=80.844, Mean=4.2500, SD=1.21709)

With regards to the trust criterion to participate in public policy formulation using Internet by gender (Question 24), as demonstrated in Table 4.15, the mean score is 4.25 with a standard deviation of 1.21. Thus, both groups (males and females) unanimously agreed that a trust criterion is important in public policy formulation participation. The Chi-square test showed that there was significant difference between males and females with regard to trust criteria at $p < 0.05$.

Table 4.16

Chi-square test on perceptions of the transparency criteria to participate in public policy formulation using Internet by gender

GENDER		TRANSPARENCY					
		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	Total
Male	Count	10	23	38	96	143	310
	% within GENDER	3.2%	7.4%	12.3%	31.1%	46.0%	100.0%
	% within TRANSPARENCY	71.4%	59.0%	67.9%	57.8%	54.6%	57.8%
	% of Total	1.9%	4.3%	7.1%	17.9%	26.5%	57.8%
Female	Count	4	16	18	70	118	226
	% within GENDER	1.8%	7.1%	8.0%	31.0%	52.2%	100.0%
	% within TRANSPARENCY	28.6%	41.0%	32.1%	42.2%	45.4%	42.2%
	% of Total	.7%	3.0%	3.4%	13.1%	22.1%	42.2%
Total	Count	14	39	56	166	260	536
	% within GENDER	2.6%	7.3%	10.5%	31.0%	48.6%	100.0%
	% within TRANSPARENCY	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	2.6%	7.3%	10.5%	31.0%	48.6%	100.0%

(df=4, χ^2=4.490, p=.344, T-Test: t=91.600, Mean=4.1530, SD=1.04966)

With regards to the perceptions of the transparency criterion (Question 25), as displayed in Table 4.16, the mean score is 4.15 with a standard deviation of 1.05. Thus, both groups (males and females) suggested that transparency criterion is "Important". The Chi-square test indicated that statistical no significance difference existed in the transparency criterion between males and females at p > 0.05.

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Table 4.17

Chi-square test on perceptions of the responsiveness criteria to participate in public policy formulation using Internet by gender

GENDER		RESPONSIVENESS					Total
		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	
Male	Count	8	29	34	96	143	310
	% within GENDER	2.6%	9.4%	11.0%	31.1%	46.0%	100.0%
	% within RESPONSIVE	80.0%	61.7%	65.4%	60.8%	53.0%	57.8%
	% of Total	1.5%	5.4%	6.4%	17.9%	26.5%	57.8%
Female	Count	2	18	18	62	126	226
	% within GENDER	0.9%	8.0%	8.0%	27.4%	55.8%	100.0%
	% within RESPONSIVE	20.0%	38.3%	34.6%	39.2%	47.0%	42.2%
	% of Total	0.4%	3.4%	3.4%	11.6%	23.6%	42.2%
Total	Count	10	47	52	158	269	536
	% within GENDER	1.9%	8.8%	9.7%	29.5%	50.1%	100.0%
	% within RESPONSIVE	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	1.9%	8.8%	9.7%	29.5%	50.1%	100.0%

(df=4, χ^2=6.653, p=.155, T-Test: t=92.130, Mean=4.1679, SD=1.04737)

Table 4.17 represents the mean score of 4.17 with a standard deviation of 1.05 for the perception regarding the responsiveness criterion of participation in public policy formulation. Both groups (male and female) felt that the responsiveness criterion is important. Specifically, males agreed more strongly with the responsiveness criterion than females. The Chi-square test on the responsiveness criterion denoted a no significance difference at $p > 0.05$ regarding responsiveness criterion of participation in public policy formulation between genders.

Table 4.18

Chi-square test on perceptions of the accessibility criteria to participate in public policy formulation using Internet by gender

GENDER		ACCESSIBILITY					
		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	Total
Male	Count	10	34	31	80	155	310
	% within GENDER	3.2%	11.0%	10.0%	25.9%	49.8%	100.0%
	% within ACCESSIBILITY	71.4%	63.0%	79.5%	62.5%	51.3%	57.8%
	% of Total	1.9%	6.4%	5.8%	15.0%	28.8%	57.8%
Female	Count	4	20	8	48	146	226
	% within GENDER	1.8%	8.8%	3.5%	21.2%	64.6%	100.0%
	% within ACCESSIBILITY	28.6%	37.0%	20.5%	37.5%	48.7%	42.2%
	% of Total	0.7%	3.7%	1.5%	9.0%	27.3%	42.2%
Total	Count	14	54	39	128	301	536
	% within GENDER	2.6%	10.1%	7.3%	23.9%	56.1%	100.0%
	% within ACCESSIBILITY	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	2.6%	10.1%	7.3%	23.9%	56.1%	100.0%

(df=4, χ^2=15.474, p=.004, T-Test: t=87.693, Mean=4.2052, SD=1.11021)

As demonstrated in Table 4.18, the mean score of accessibility criterion was 4.21 with a standard deviation of 1.11. Thus, both groups (males and females) were concerned about the accessibility criterion of public participation in public policy formulation. The result of a Chi-square test revealed that there was a significant difference in perceptions between males and females at $p < 0.05$. Specifically, they were more concerned about accessibility criterion in participation in public policy formulation than availability.

Table 4.19

Chi-square test on perceptions of the secrecy criterion to participate in public policy

formulation using Internet by gender

GENDER		SECRECY					Total
		Extremely Important	Important	Uncertain	Unimportant	Extremely Unimportant	
Male	Count	16	33	54	50	157	310
	% within GENDER	5.2%	10.7%	17.5%	16.2%	50.5%	100.0%
	% within SECRECY	57.1%	62.3%	75.0%	75.8%	49.4%	57.8%
	% of Total	3.0%	6.2%	10.1%	9.3%	29.2%	57.8%
Female	Count	12	20	18	16	160	226
	% within GENDER	5.3%	8.8%	8.0%	7.1%	70.8%	100.0%
	% within SECRECY	42.9%	37.7%	25.0%	24.2%	50.6%	42.2%
	% of Total	2.2%	3.7%	3.4%	3.0%	29.9%	42.2%
Total	Count	28	53	72	66	317	536
	% within GENDER	5.2%	9.9%	13.5%	12.3%	59.1%	100.0%
	% within SECRECY	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	5.2%	9.9%	13.5%	12.3%	59.1%	100.0%

(df=4, χ^2=27.102, p=.000, T-Test: t=72.210, Mean=4.0970, SD=1.26118)

Table 4.19 shows that a mean score of the secrecy criteria was 4.09. The Chi-square

test identified that there was significant difference between males and females on their

perceptions of the secrecy criterion at $p < 0.05$. Both groups (males and females) felt

that secrecy is an important criterion.

Table 4.20

Chi-square test on perceptions of the current level of participation in public policy formulation by gender

| GENDER | | CURRENT lEVEl | | | Total |
		Informing	Consulting	Decision Making	
Male	Count	161	131	18	310
	% within GENDER	51.8%	42.4%	5.8%	100.0%
	% within CURRENT LEVEL	56.3%	62.7%	42.9%	57.8%
	% of Total	29.9%	24.5%	3.4%	57.8%
Female	Count	124	78	24	226
	% within GENDER	54.9%	34.5%	l0.6%	100.0%
	% within CURRENT LEVEL	43.7%	37.3%	57.1%	42.2%
	% of Total	23.2%	14.6%	4.5%	42.2%
Total	Count	285	209	42	536
	% within GENDER	53.1%	39.1%	7.9%	100.0%
	% within CURRENT LEVEL	100.0%	100.0%	100.0%	100.0%
	% of Total	53.1%	39.1%	7.9%	100.0%

(df=2, χ^2=6.132, p=.047, T-Test: t=56.325, Mean=1.5485, SD=0.63649)

As demonstrated in Table 4.20, both genders selected "Informing" level as the primary current level of participation. The frequencies for current level of participation is 53.1%, followed in decreasing order of importance level by "Consulting" level (39.1%), and, "Decision Making" as the least important level (7.9%). The Chi-square test revealed a p value of .047. Thus, there is a significant difference existed between males and females regarding perceptions of the current level of participation at $p < 0.05$.

Table 4.21

Chi-square test on perceptions of the current level of participation in public policy formulation by gender

GENDER		FUTURE lEVEl			Total
		Informing	Consulting	Decision Making	
Male	Count	42	205	63	310
	% within GENDER	13.6%	66.3%	20.1%	100.0%
	% within FUTURE LEVEL	45.7%	61.9%	55.4%	57.8%
	% of Total	7.9%	38.3%	11.6%	57.8%
Female	Count	50	126	50	226
	% within GENDER	22.1%	55.8%	22.1%	100.0%
	% within FUTURE LEVEL	54.3%	38.1%	44.6%	42.2%
	% of Total	9.3%	23.6%	9.3%	42.2%
Total	Count	92	33l	113	536
	% within GENDER	17.2%	61.9%	20.9%	100.0%
	% within FUTURE LEVEL	100.0%	100.0%	100.0%	100.0%
	% of Total	17.2%	61.9%	20.9%	100.0%

(df=2, χ^2=8.156, p=.017, T-Test: t=76.524, Mean=2.0373, SD=0.61637)

Table 4.21 showed, both males and females showed a similar suggestion on the future level of participation in public policy formulation (Question 22). An overwhelming majority (62%) of the respondents reported that "Consulting" should be more appropriate for the future. The Chi-square test identified that there was a significant difference between males and females regarding the future level of participation in public policy formulation at $p < 0.05$.

4.7 Summary of Findings and Chapter Conclusion

One of the objectives of this study is to ascertain information regarding current state of perception and participation in public policy formulation process. The goal is to discover vital aspects that might influence the success of public participation in public policy formulation. These aspects should be closely observed and should be considered in the design phase.

One of the most important findings of this survey is that majority of Malaysian share similar concerns and aspirations. The survey found that people's aspirations and attitudes are strongly related. People who are concerned about public policy are much more positive towards the use of Internet technology (e-participation) as a mechanism to participate in the process. In addition, the survey found that obtaining public policy content is the most important aspect in e-participation service. However, the current Internet infrastructure services and devices will minimise the utilisation of e-participation. Most of the respondents agreed that the accessibility to e-participation will determine the success of the implementation of e-participation.

Majority of the respondents were aware of public policies formed and their impacts on them. Their awareness and commitment will be higher if the Government provides opportunity for them to get involved in public policy formulation process. Among the available channels are the government officials, petition signing, using the press or demonstration. Participation from the people may definitely enhance the effectiveness of public policy formed by the Government. Government also will indirectly benefits from various information, opinions, and ideas gained by enhancing the democracy system currently practiced. The respondents also agreed that current participation level is at "Announcement" and it needs to be enhanced to "Consultation" level where the people's participation is required in public policy formulation process. Majority of the respondents also expected a strong support from wide variety of services, well-developed and often updated public participation platforms with strong integration to e-participation solution. As previously described, this is due to the increase of Internet usage among the people.

Finally, it can be concluded that the future of public participation is bright. However, a lot of efforts should be done to satisfy people's high expectations, and to ensure a high rate of its utilisation. In addition, the study provides an understanding of the specific criteria ("Trust", "Transparency", "Responsiveness", "Accessibility", and "Secrecy") to be considered in managing participation in Malaysian environment, which most likely contributes to the people's continuous trust and loyalty.

CHAPTER FIVE

THE REQUIREMENTS FOR E-PARTICIPATION FRAMEWORK

5.1 Introduction

Based on the main objective "to develop an e-participation framework in public policy formulation", a set of requirements related to e-participation was identified. This chapter explains how the requirements were identified before it could be implemented in the e-participation framework. These were to ensure that the requirement obtained contributed solely to achieve the main objective. The requirements were on how e-participation framework is formed to foster people-Government cooperation in formulating public policies.

The researcher explores on how public participation can be translated into e-participation framework. The study embraces the socio-technical research paradigm and uses Actor Network Theory (ANT) as the theoretical foundation with which to explore the mutual interaction between people and ICT. Based on the requirement for e-participation framework, the researcher suggests the usage of an e-participation framework for public policy formulation in Malaysia. The framework is initially presumed to be sustainable as it is designed to fit under any socio-technical conditions and can be initiated by the public.

Over the last decade, there has been a growth in number of studies on the need to develop new tools for public participation that enables the mass public to contribute to the public policy debate, where their contributions will be broader and deeper (Barber, l984; Held, l996; Fishkin, l995; Van Dijk, 2000). An innovative version of public participation has been proposed to change the current conventional bureaucratic

system to a system that is more democratic, open, transparent, and trustworthy. E-participation is the new means of participation and it is a sub-set of e-government and e-democracies. It is based on the presence of ICT in facilitating public's participation in the Government's public policy formulation.

E-participation has the potential to establish more transparency in the Government by allowing citizens to use new channels of influence that is capable to reduce barriers to public participation in policy making (Hacker et al., 2000). Online communities are being created on a daily basis on themes such as environment, politics, education, social, and economic issues, among others. An increasing number of citizens are becoming bloggers and are posting their views on these and other subjects for the world to see and react to. They are creating their personal forms of e-participation. Similarly, politicians are creating blogs to reach out to the cyber world constituency that is growing in number and influence. This direct interaction using ICT tools is unprecedented and ushered in an era of direct dialogue between politicians and citizens (United Nations, 2008). On the other hand, several studies revealed that utilisation of new technologies may not lead to better participation in organisations. To a certain extent, it paves the way to improve informal communication between all existing individuals rather than creating new participating members (Komito, 2005). In addition, ICT tools have been proven to be unable to support a participatory technique that may need important modifications of the traditional structure (Tambouris et al., 2007).

To normalise and make e-participation a success, the participating Governments need to create an environment that allows citizens to voice their views online and more

importantly, to create a feedback mechanism that shows citizens that their views are taken seriously. This requires trust between citizens and the Governments, as well as a robust infrastructure that allows citizens to discuss policy-related issues with the decision makers. With this motivation in mind, the current public policy formulation in the Malaysian practice by utilizing the Actor Network Theory (ANT) has been analysed to propose an e-participation framework in the country's public policy formulation.

This study is designed to support the framework of e-participation in the area of public policy formulation. In this context, a major output of this study is the development of a framework for e-participation with the purpose to identify the building blocks of the framework.

5.2 Level of E-participation Framework

In this section, the researcher identifies the key level of participation relating to the e-participation framework. These levels of e-participation are based on the literature analysis as presented in section 2.6 in chapter 2 (OECD, 2001; Macintosh, 2004; United Nation, 2004) as well as the survey which was presented in Table 4.9 in chapter 4. Using the relationships above as the basis for the e-participation framework requirements, and considering the definition of e-participation as described in section 2.5.3 in chapter 2, the researcher has developed three levels of participation that can be used as the main requirements of e-participation framework.

Based on the analysis from section 2.6 in chapter 2 and supported by table 4.9 in chapter 4, democratic participation must involve the means to be informed, the

mechanisms to take part in the decision-making, and the ability to contribute and influence the policy agenda. From these, the researcher has identified three basic key terms of relationship.

Basic relationships in e-participation can be divided into three groups, which are: (l) Information, a one-way relationship in which government produces and delivers information to be used by citizens. (2) Consultation, a two-way relationship in which people provide feedback to the government, based on the prior definition of information. The Government defines the issues for consultation, set the questions and manage the process, while citizens are invited to contribute their views and opinions. (3) Active participation, a relationship based on partnership with government in which people actively engage in defining the process and content of public policy formulation. It acknowledges equal standing for people in setting the agenda, although the responsibility for the final decision rests with government.

5.2.1 Level l: E-information

The first level is the use of technology to involve people. E-information is about supporting those who could not typically access the Internet and take advantage of the large amount of information available on the web. The objective of this level is concerned with how technology can be used to reach more people by providing a range of technologies to cater for the diverse technical and communicative skills of people. The technology also needs to provide relevant information in a format that is both more accessible and understandable. These two aspects of accessibility and understandability of information are addressed by e-information.

5.2.2 Level 2: E-consultation

The second level is the use of technology to engage people. Engagement with people is concerned with consulting a wider pool of audience to enable deeper contributions and support deliberative discussion on public policy issues. The use of term 'to engage' in this context refers to the top-down consultation of people by the government.

5.2.3 Level 3: E-Decision Making

The third level is the use of technology to form partnership with citizens. In this level, people are expecting that they can actively participate in giving ideas/opinions and their ideas are considered. The top down perspective of democracy is characterized in terms of user access to information and reaction to government led initiatives. From the bottom-up perspective, citizens are emerging as producers rather than just consumers of public policy (Macintosh et al., 2002). There is a recognition that citizens need to be allowed to make decisions and participate in public policy formulation. All these levels of participation are useful as they indicate a scale of 'participation' in policy-making, along with e-participation framework.

5.3 Main Requirements of E-participation Framework

E-participation is still an evolving domain and only limited number of requirements has been proposed for the e-participation framework. Although not specific to e-participation but to participation in general, the requirements for e-participation framework has been identified by several researchers (Rifkin et al. 1988; Tambouris et al. 2007b; Phang and Kankanhalli, 2008; Islam, 2008). The researcher specified a number of requirements that are essential for effective public participation.

a) Identifying Group of Users

This group of users considers 'who' should participate and by 'whom'. It should specifically identify the target audience and the stakeholders, and their respective roles. The possible stakeholders in the e-participation initiatives will typically include decision-makers, champions of a particular public policy and various experts in the public policy field.

For this case, suggested by chapter 2 in section 2.9.3, the researcher considered government ministers, elected representatives, political parties, government employees (as the parties responsible for implementing and drafting policies), media, individuals, businesses and non-government organizations (NGOs). In the e-participation field, this grouping will be increased and stakeholders will include a multi-disciplinary team to support the socio-technical nature of e-participation.

The increased number of stakeholders risk complicating the questions of who 'owns' the results and who has responsibility for communicating their impact on decisions, so identifying and clarifying these responsibilities is useful in characterizing e-participation initiatives. These stakeholders have a number of tasks to do during the e-participation which includes: developing precise participation e-content, managing and controlling the participation process, providing and agreeing background information, helping to promote the initiative, analyzing and evaluating of results, incorporating results into policy, and disseminating the results. Various actors participate differently in e-participation initiatives, so knowledge of their characteristics may be an important prerequisite for developing targeted e-

participation initiatives. The actors addressed in the literature can be divided into several groups.

The researcher has identified group of users as the framework's core component. The formulation of public policy is revolves around five user groups, namely 1) Citizens that represents the entire user community, 2) Documents that represents the technical draft and reports, 3) Organizations that represents key persons in the public policy field, 4) Delivery Methods that represents the communication platform for citizen to participate and 5) Technologies to provide the infrastructure for support Delivery Methods.

5.3.1 Citizens Building Block

Citizen participation is the principle focus for majority of research on e-participation. Citizens are often discussed in relation to other stakeholder groups. The relationship between citizens and politicians is widely discussed, focusing on the interaction between the two groups (Hudson-Smith et al., 2005), on how participation varies between these stakeholder groups (Clift, 2000), and on discussion of their specific roles (Fernández-Maldonado, 2005). The Internet and other ICT developments offer new opportunities for participation (Hacker, 2004; Luhrs et al., 2003) and may empower citizens in the political discourse.

Though much discussed as a group in relation to citizens, political parties are rarely the main focus of attention. Two exceptions are Jensen (2003a), who argued that the presence of individual politicians was a major reason for success achieved in a discussion forum, and Sæbø and Päivärinta (2005), who discussed the importance of

addressing politicians (as well as citizens) when designing online discussion forums. Political parties are usually analyzed as a group, often seen as being a central part of political campaigning (Howard, 2005).

E-participation is seen as a new opportunity for input not only from people but also from NGOs (Berman &Witzner, l997). Park (2002) and Khanna (2005) stated that the grass-roots movements may organize and coordinate activities more easily by using the Internet and by building grass-roots networks which may lead to online activism. Taylor and Burt (2005) argued that NGOs have a growing significance and will act as intermediaries in the delivery of e-participation. Jensen (2003) discussed whether government sponsored initiatives are more successful than private initiatives in shaping conditions for democratic dialogue.

5.3.2 Documents Building Block

The researcher argued that pure information exchange activities lie outside the scope of e-participation because there is no participative element exists. However, the information background to public participation, whether technology enabled or not, is an important part of the landscape of e-participation. Some studies discussed the connection between information exchange and e-participation and are thus included here (Moreno-Jimenez & Polasek, 2003; Polat, 2005; and Dutta-Bergman, 2005).

To increase participation in the public policy formulation, Polat (2005) argued that Internet information sources and communication media need to be present. Well-organized information sources are an important prerequisite for information retrieval and thus encourage participation in decision-making processes (Moreno-Jimenez &

Polasek, 2003). Without equal distribution of information, the differences between the information poor and the information rich may further increase, resulting in unequal opportunities to participate in democratic processes (Norris, 200l).

The relation between information availability and public participation is further studied by Bimber (200l), who found little connection between increased accesses to information and increased participation. He argued that the information revolution does not prove salutary for increased political participation. Steyaert (2000) argued that local government Web sites are primarily one-way information streams to citizens as customers, carrying the risk that Internet services will support electronic government shops, rather than communities.

5.3.3 Organizations Building Block

Internet-based e-participation initiatives may be seen as tools and instruments for new modes of governance (Bingham et al., 2005) and for participating people with bureaucracies (Chadwick, 2003). The government is highlighted in studies focusing on specific services where citizens are included such as in planning processes (Kangas& Store, 2003) and federal rule making (Carlitz& Gunn, 2002).

Government organizations may both influence and be influenced by the introduction of e-participation activities (Bekkers, 2004). Relationships to external organizations may change. Taylor and Burt (2005) discussed the role of government organizations, arguing that these organizations will become important intermediaries in the delivery of e-participation initiative. Chadwick and May (2003) argued that ICTs are reshaping governance without being specific about the characteristics of such changes. Others

argued that changes in organizational structures will or should occur when introducing e-participation (Bekkers, 2004 and Bingham et al., 2005). Fulla and Welch (2002) tried to identify ways that different communication feedback mechanisms influence organizations.

5.3.4 Delivery Methods Building Block

E-participation projects related to online decision making are more directly connected to the decision-making process. Several debates raised concerned to online decision making in the e-participation literature include the consideration of online decision making as an opportunity to reinvent public participation (Chang, 2005), and the potential negative impact of providing further decision-making possibilities for the already advantaged (Albrecht, 2006). Increased participation may be achieved by involving citizens more directly in planning processes (Hudson-Smith et al., 2005).

Some researchers investigated how Geographic Information System (GIS) could be used to increase citizens' influence on neighborhood planning (Al-Kodmany, 2000). Other researchers focused on how to include feedbacks from citizens in political decision-making process (Lourenco & Costa, 2006; Whyte & Macintosh, 2003), and document and communicate the effect of citizens' feedbacks (Shulman et al., 2003).

Several research challenges can be identified concerning online decision making. The digital divide is a focus for concern (Al-Kodmany, 2000; Albrecht, 2006; Gimmler, 200l) with few suggestions on how to address this issue. Online decision making is seldom embedded in e-government strategies and the impact of citizen participation is hard to identify (Bekkers, 2004). Thus, strategies are needed for structuring online

deliberation into real decision making (Lourenco & Costa, 2006) and for connecting online and offline communication services (Hudson-Smith et al., 2005).

E-participation systems are normally applications of established technologies and tools, rather than major technological innovations. These underlying technologies and tools have their own development courses that are largely independent of e-participation. These courses therefore influence which technological and tools opportunities are available for e-participation solutions. The shape of the underlying technologies is also found to influence public participation (Gross, 2000).

Online forums are utilized in many e-participation projects (Ainsworth et al., 2005; Bekkers, 2004; Hagemann, 2002). Tsaliki (2002) focused on how to design technology and tools for increased interaction in e-participation projects, while Sæbø and Päivärinta (2005) argued that there is a need to design systems in a way that allows dynamic development continuously meeting the requirements from different stakeholders. Other examples of underlying technologies include GIS, Web logs (blogs), and data mining. Elwood (200l) argued that GIS fosters changes in community planning and urban revitalization. Meanwhile, blogs are expected to improve participation in the public debate (Johnson & Kaye, 2004). Data mining techniques allowing automatic searches of large quantities of data may have the potential to improve diffusion of information (Howard, 2005).

This key dimension considers *how* and *with what* to engage citizens and support participation. The main characteristics that we need to appreciate here are the tools of the technology. There is also a need to state whether it was an in-house development, collaborative development with external agencies or commercially available of the

shelf software. With regards to e-participation, this has generally involved the text-based provision of information either delivered passively or actively on demand (Ainsworth et al., 2005). The more innovative styles of this involve the underlying technologies of avatars, natural language processing (NlP) and speech technology (Bekkers, 2004).

According to Panopoulou et al. (2008), e-participation is typically based on discussion forum technology and has taken one of the two forms:

- Issue-based forums – It is organized around policy issues that have been formulated by policy-makers, interest groups or 'experts', and presented as the heading of one or more discussion 'threads'. Responses are sought in order to gauge opinions or solicit ideas. Position statements, links to topic related websites and other background information may also be presented.

- Policy-based forums – It is organized around themes/issues that relate directly to a draft policy that is meant to address these, and where discussion threads are intended to solicit responses from those affected. Participants might be encouraged to submit alternative ideas and suggestions but the format implies that what is being sought is an indication of how far the participants agree or not agree with the proposals, and their justification.

There are several well-developed tools to encourage open deliberation of public policy to support face-to-face meetings and to visualize learned argumentation; such tools could be adopted to support deliberative e-participation. With regards to e-participation, it is the potential mechanisms for gathering citizens' opinions and

comments to influence public policy formulation. The development of 'online communities' of interest, in which specific policy issues are debated and alternative proposals formulated based on discussion forums, are also examples of online empowerment. Though our outline concept identifies technology as an important factor in e-participation, few of the identified research contributions above primarily address technology. The literature sample focuses heavily on social activities or patterns and tends to ignore detailed technical aspects.

5.3.5 Technologies Building Block

Technology facilitates or mediates the extension or transformation of e-participation, often meaning that: more or different people can participate; the effect of the activity is magnified or focused at new actors; and/or the form of the activity itself is altered. E-participation activities often adapt existing technologies that are well known and are already in use for various purposes. One characteristic of all such technologies is that they are dependent on technical and conceptual infrastructures, such as the World Wide Web.

Based on the survey stated 4.4 in chapter 4, respondents agree if a major driving force in the e-participation area is the widespread adoption of the Internet. Without this electronic infrastructure, e-participation services could not have been developed (Chadwick, 2003). The Internet is often taken for granted rather than explored. It is either present or absent and is often considered as a unitary technology rather than a diverse collection of infrastructures delivering an even more diverse collection of technologies (Ainsworth et al., 2005; Dutta-Bergman, 2005; Jensen, 2003b).

Grönlund (2002) studied the Swedish government's establishment of infrastructure and found that different implementations of ICT on the emerging electronic infrastructures may result in varying directions of development. Koch (2005) is pessimistic over the prospect of extending participation through Internet-based technologies, arguing that the Internet is designed for one-way delivery of political text, not for enabling public participation. These commentaries suggested that the infrastructure characteristics may influence the potential outcomes of e-participation initiatives. Thus, infrastructure should not be taken for granted in e-participation studies.

b) Identifying the Actors and Roles

Firstly, it is crucial to identify the root of the problem. To do so, the researcher investigates the situation and current practice implemented in Malaysian public policy formulation. In applying ANT, the term 'actor' was used to represent any elements that are linked to the public policy formulation process. They are the central elements in the actor network. Actor can be described as any element that makes other elements dependent upon it. They can only do things in association with others and we can see actor as node and central point in a network (or networks). Actor can also be seen as an entity that interacts with other actors or serves as an intermediary between actors.

The list of actors that have been identified will add their roles to better understand their relations with other actors. These roles are based on the current practise of policy formulation institutional framework and some new roles appropriate to the public policy formulation are also added. The data that was collected will be divided to the group of actor. The entire group of actors that have been identified by the researcher

have their specific roles in the public policy framework and they depend on each other. The researcher refers to the current practice of public policy formulation to divide the group of actors and their respective roles.

Besides identifying the actors involved in this case, current practices of public policy formulation were also identified during the survey. Although this group has multiple ways to participate in public policy formulation, yet they still did not have a dedicated platform to enable public participation environment. The process of participation is being done in typical approaches such as meetings, discussions, forums, e-mails, phone calls, websites, bulletin boards, trainings, workshops, and seminars. These approaches can be synchronous and asynchronous collaboration tools. All approaches listed above only cater to limited number of participants. Only certain people might get involved, particularly in meetings and discussions.

Not all information needs to be known by all actors. However, the rest of the actors need to know clearly about the direction of the public policy at the very least. E-mail is an effective tool in communicationbut it also has limitations, especially in performing works and tasks that require collaborations. It can be used to notify the actors that a new public policy will be developed. However, it is not a good platform to discuss about the policy. Numerous e-mails are sent and received throughout the day. In many organisations, it is common to see a number of people to keep sending and receiving emails with the same title although the issue discussed in the email has been already out of topic. This situation does not really help the actors to manage information efficiently. Moreover, searching for the intended information from hundreds of received emails is a tedious process.

Meetings are conducted by responsible ministries or departments in order to revise, update or initiate a new policy or project. The attendees are usually senior officials from relevant ministries and central agencies. Aside from government officials, they also include representatives from the private sector and civil society, where necessary. During these meetings, factors such as the international scenario, resource availability and constraints, and implementation capacity are considered. The information only conveyed within peoples who attended the meetings. However, majority of the citizens who are interested in policy formulation process are not directly involved in expressing their opinions, views, ideas, comments, suggestions, information, objections or acceptances. So, from a researcher's view, this can cause this large number of people to feel uncomfortable in accepting public policies.

Based on the analysis above, the researcher has created five groups of actors. Table 5.l shows the identified group of actors, the respective actors, and their roles that can be enrolled as actors in building the actor network. Each actor has different roles in supporting public policy formulation process.

Table 5.1

Group of actors, actors, and their roles in e-participation framework

No.	Group of Actors	Actors	Roles
1	Citizens	Media, political parties, NGOs, interested groups and individuals	To discuss the suggested public policy

No.	Group of Actors	Actors	Roles
2	Documents	Draft plan of public policy, public policy hearing report,revision plan of public policy, issues and potential report, suggestion report, final public policy report	To present the draft plan of public policy, to publish the public hearing report, to provide a draft revision plan of public policy, to provide a public notice, to publish the issues and potential report, to present a suggestion report, to provide final public policy report
3	Technologies	Hardware, software, network	To support the operation of citizens participation process, to provide the infrastructure for citizens participation in public policy formulation
4	Delivery Methods	E-meetings/e-discussions/ E-forums, emails, phone calls, instant messaging, Internet and websites, bulletin boards, trainings, workshops and seminars	To provide a communication platform for citizens to participate in public policy discussion process

No.	Group of Actors	Actors	Roles
5	Organisations	All ministries, departments, Cabinet, and Parliament	To provide training and support to people across Malaysia, to endorse public policy, to make a public policy decision, debating the public policy, to recommend and make decision to table public policy in the Parliament, to plan and formulate the direction and strategy of public policy, to offer and manage the technical aspect of public policy

c) Identifying the Causes

Problematisation is also about defining possible causes that influence the problem. These possible causes are based on the survey that has been conducted earlier. Based on the survey, some major problems/causes have been identified. The first cause identified is the lack of a dedicated official platform to channel information to the public. Despite of the fact that information is being transferred in multiple ways, it is limited to certain boundaries. The information and experience can also be transferred easily if the discussion is participated by experienced people. In this case, those who are not associated with the key actors might be left behind. Physical location also contributes to the lack of collaboration between the policy maker and the public. The discussion is the only chance for the public from all states in Malaysia to voice out their opinions.

The second source of the problem originates from the lack of public participation. Officers in ministries and departments are usually the key persons involved in public

policy formulation while citizens sometimes do not know exactly what is public policy direction and strategy in Malaysia. However, based on the survey conducted earlier in this study, majority of the respondents felt that public participation is important to the public policy formulation. Also, the feedbacks from respondents show that most of them are satisfied if they can take part in public policy formulation.

The third source of the problem is the lack of awareness among citizens on the public policy formulation. From the survey conducted, not all respondents were aware of how important their participation in public policy formulation is. In this situation, there were two groups of users: A and B. Group A consisted of respondents who agreed that participation among citizens is important, and Group B consisted of respondents who were unaware of the importance of their participation in public policy formulation. Media, politicians, NGOs, interest groups, and a few individuals belong to Group A. Their roles were to focus and define public policy based on their ideas and feelings. They were aware of the fact that it is crucial to share the information to policy makers and to be responsible in formulating the public policy. Meanwhile, the roles of people in Group B were to focus and define the public policy direction in Malaysia and to execute the strategy. However, they were not really aware of the importance of public participation in formulating the public policy. Group B has to be dependent on Group A to formulate the public policy. Therefore, it is not easy for the Governmental body to manage the information and to let public to get involved in formulating public policy.

To enable information transfer in public policy formulation environment, a platform where Groups A and B can communicate, discuss, and share their voices and

experiences is needed. A dedicated web platform with suggested e-participation framework that can be accessed by all in Malaysia is proposed as a solution to this problem.

d) Building the actor network diagram (Conceptual Diagram)

Actor network diagram is fundamental in understanding the relationship among actors in their own network (Callon, l986, Lutour, 2005). They stated that ANT diagrams are an efficient tool that can reveal the interaction of actors in the scope of a network. These basic diagrams are illuminating in that they begin to map out the available people, places, and things that participants may encounter in a given system. This mapping helps developers to understand the available nouns that their users could leverage. To begin understanding the context in which participants use these systems, designers must first understand who and what are involved in these scenarios.
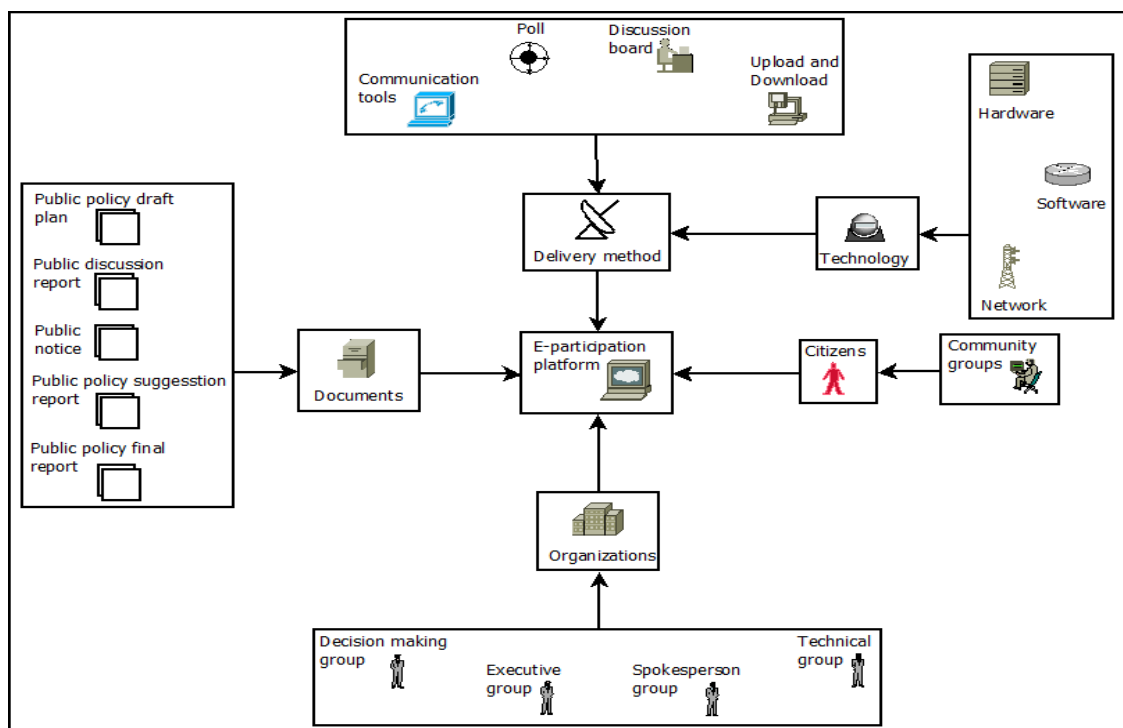
Figure 5.1. The conceptual diagram of e-participation platform for citizen participation in public policy formulation

Mapping out all of the possible actors in any given network is a vital first step in designing these systems, because it helps designers to catalogue all active participants. Figure 5.l shows the interaction of all actors involved in e-participation web platform. If one actor fails to interact or does not act according to its roles, the system may fail. To understand the relationship among actors and to actually believe that all actors need to work together are two important elements of ANT concept.

e) Interessement

The combination of different actors with different roles contributes to different interests among them. Table 5.l above shows the different kind of actors with different interests in enabling citizens participation in public policy formulation environment through a dedicated e-participation web platform. One of the main ideas of ANT is that we should not only look at the human entity. Non-human entities such as objects, organisations, and technology should be taken into consideration as well. To address the problem in this case, focal actor namely IAPGs and TWGs need to convince other actors with the idea of a dedicated e-participation web platform. The idea is to try and rationalise the citizen participation environment. Other actors must be aware of the problematisation and contribute thought that leads to the creation of a participation environment.

i. Identifying the obligatory passage point (OPP)

Obligatory passage point is a stage that has to take place in order for all the actors to achieve the goal. As in this study, the OPP refers to a question on the capacity and responsibility of TWGs to manage and implement the e-participation platform.

ii. Identifying obstacles and enrolment

The researcher has created and developed the appropriate e-participation platform and contents for community group. As we know, physical location serves as an obstacle. This team of IAPGs and TWGs needs to clearly understand each other's role in contributing to the success of participation in public policy formulation. Realising this issue, the IAPGs have created one committee (TWGs) to manage and maintain this platform. This committee is responsible to manage and maintain the platform.

Another challenge that should be considered in implementing the e-participation platform is the role of this platform to act as a one stop centre for citizen participation in public policy formulation. The e-participation might fail if only a small number of community groups participate. In order to get full participation, IAPGs and TWGs ought to promote the e-participation platform and assign a representative in every community group.

A framework of ANT has to be illustrated for easy understanding of problem and case translations. This framework captures the elements of ANT that affect all actors in the system. Therefore, focal actor has identified the goal, which is to improve participation among the community groups through e-participation platform. All actors then align their interests and roles in achieving the goal. However, this process needs to go through OPP first. Obstacles have been identified and mechanisms such as creation of the committee are a part of interessement mechanism in achieving the goal.

Using an actor network approach, the main actors have been identified, and the relationships between them have been mapped. In this research, contents, documents, group of users, personal interviews, focus groups, and participant observations have been utilised. The results of the analysis indicate that there are significant differences in the types of actors and the networks that they exist in. But how exactly ANT contributes to this research? ANT highlights the relationship of actors that does not distinguish between human and non-human. A network should contain both of the elements.

When talking about citizens participation in this case, we should see it as one heterogeneous network that binds all actors that require each other and have to work together to strengthen this network. By looking at the relationships between actors, contents, delivery method, and organisations, it identifies "actor networks" as the fundamental building blocks of technology.

Normally, a failure of information system (IS) research or IS development is either due to the user or the system factor. This failure usually emerges when a few aspects are overlooked during the progress of the research or development. ANT does touch all single aspect of element by considering all related actors even if the element may be outside of the project's scope. Normal approach of IS does not really touch on the relationship and social connection between actors while in ANT, this aspect is emphasised as it is believed that failure in understanding the social connection may contribute to a weak network.

5.4 The Proposed E-participation Framework in Public Policy Formulation

Therefore, in reflection to the mentioned ANT concepts and findings, this section suggests the following e-participation framework. The framework is initially to be sustainable since it is planned and designed to fit under socio-technical conditions and can be initiated by public agencies. Based on the requirement and the conceptual diagram of e-participation platform above, the researcher has proposed a framework is made up from five main building blocks as shown in Figure 5.2.

Generally, the researcher's idea on the framework proposed focuses on how to achieve a public policy that satisfies people's wills. To achieve the framework, the researcher comes out with three main parts namely community, e-participation pillars, and supporting tools. All parts have their own components that are supported by five building blocks, namely Citizen, Organisation, Document, Delivery Method, and Technology.

Community part is supported by Citizen and Organisation building blocks. In turn, these two building blocks share similar mission, vision, and value to formulate a public policy that is accepted by society in general. On the other hand, supporting parts in this case are the Document, Delivery Method, and Technology building block that sustain an e-participation platform. All building blocks will support a public participation process to formulate a public policy together. All this building blocks must support each other. The e-participation framework cannot run smoothly if one of the building blocks does not function.

Figure 5.2 below portrays a level of public participation in the proposed e-participation framework for public policy formulation in Malaysia. Based on the requirement of e-participation that have identified earlier, the lower level of participation is e-information, followed by e-consultation and the top level is e-decision making. However to run the e-participation in the first place, the platform can need to be headed by e-information. The researcher's idea in this level is how to obtain the sufficient crowd to share their ideas and opinions on public policy formulation. If that crowd have a serious interest in public policy process, the e-participation platform can be established in the middle level of participation called e-consultation. This level is more on two ways relationship which people provide feedbacks to government, contributing their views and opinions. The top level participation which is e-decision making can be realized when people actively engage the policy making process and have a partnership-based relation with the government.

PUBLIC POLICY ACHIEVEMENT

SHARE MISSION, VISION AND VALUE

ORGANIZATIONS
Represents the key person of public policy formulation

CITIZEN
to discuss the suggested public policy; (Media, Political parties, NGOs and interested group and Individual

INCREASING 1EVE1 OF PARTICIPATION AND INF1UENCE ON PO1ICY

E-DECISION MAKING
a relation based on partnership with government; citizen actively engage to the policy making process

E-COUNSULTATION
two-way relationship in which citizens provide feedback to government; to contribute their views and opinion

E-INFORMATION
one-way relationship in which government produces and delivers information for use by citizen

SUPPORTIVE RELATIONSHIP

DOCUMENTS
to present the draft plan of public policy

DELIVERY METHODS
to provide a platform for citizen participation communication

TECHNOLOGY
to support and provide the operation of citizen participation process

SUPPORTING E-PARTICIPATION PLATFORM

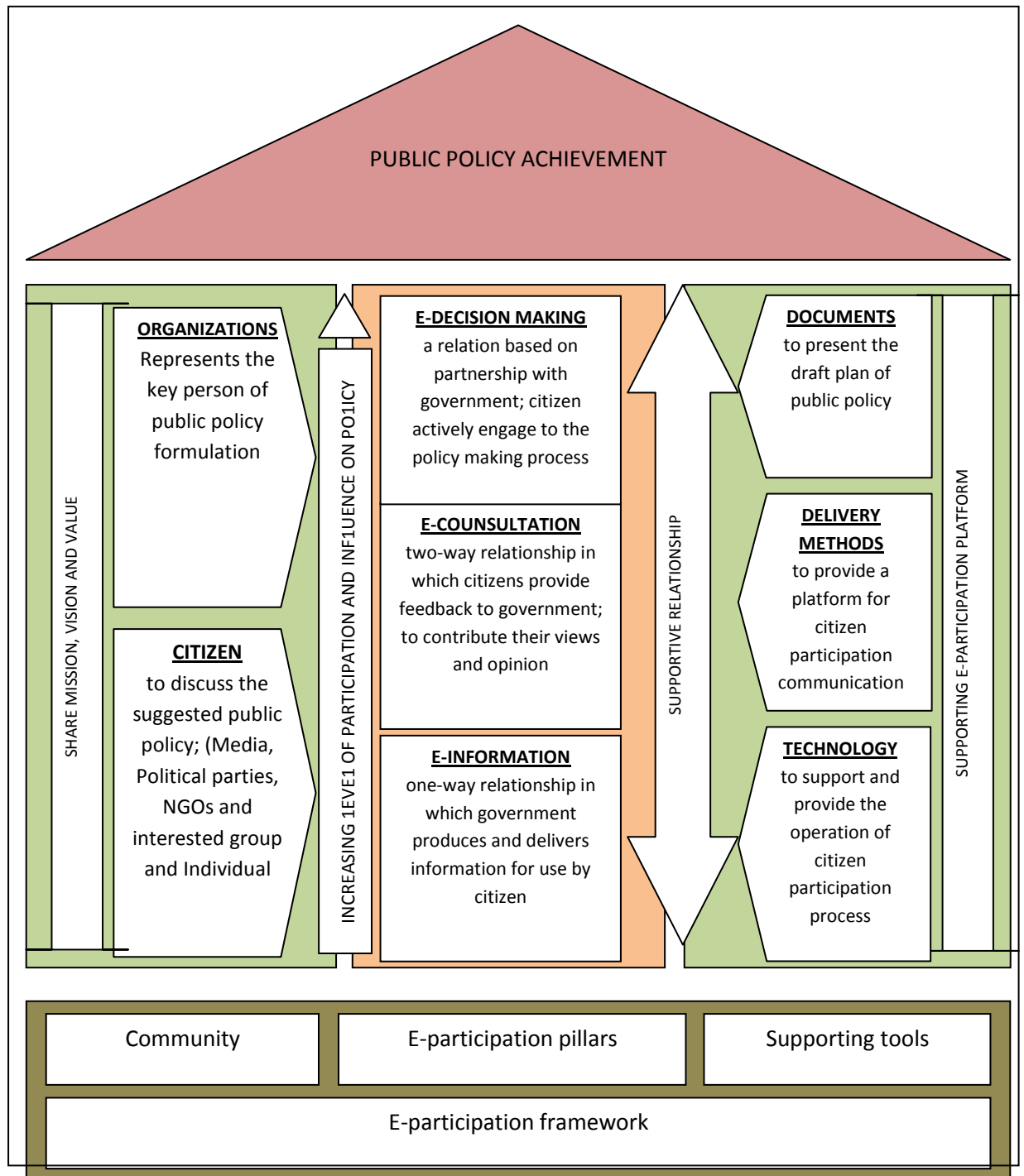| Community | E-participation pillars | Supporting tools |

E-participation framework

Figure 5.2. Proposed E-participation framework for public policy formulation in Malaysia

5.5 Conclusion

Actor Network Theory is a part of social theory that highlights on relationship of actors. Nowadays, social theory is seen as a translator and analyser tool for researcher to discover the cause and solution of a problem. This theory also helps researchers to explain and analyse how social action, social processes, and social structures work. ANT is used and implemented not only in the field of technology but also in information technology and system as well. Due to this, this case study chose to apply the ANT concept. The problem is related to ANT as this issue requires an association of multiple elements to resolve the problem.

ANT as a translation tool is embedded into the life cycle of information system methodology as stages and phases. Upon completion of this research, the researcher found that the translation of ANT is closely related to information system methodology. ANT as a sociology theory is proven to be able to adapt to information system. Through this research, the researcher has found that most of governmental organisations in Malaysia do not promote e-participation concept particularly due to lack of knowledge and collaboration effort. For formulating public policies in fields of transportation, health and agriculture, lack of participation is a huge issue. In future, an in-depth analysis or research can be conducted based on the idea that involves citizens in all levels of public policy formulation and processes.

Applying the requirements for e-participation framework resulted in development of a framework that was considered fair. However, the framework needs to be further developed. More considerations need to be placed on how and when to use the tools in which suitable contexts, also, on how to combine tools to enable inclusive

participation. Due to this, an appropriate e-participation requirement is an important aspect that should not be underestimated.

The requirements for developing an e-participation framework are vital in order to provide a well-rounded and holistic view for any e-participation initiative. However, the researcher notes that there are no standard requirements for e-participation framework as long as it suits the e-participation definition; because a standard e-participation requirement should be considered. E-participation is a hybrid of various technologies, social and political measures and there is a need to improve understanding of the relationships between these components and how their respective evaluation practices can be applied to e-participation as a whole.

E-participation activities are carried out by actors. These are normally characterized as different stakeholder groups (e.g. people and politicians). Actors are responsible not only for taking part in the various activities, but also for developing the activities and the associated technologies, and for responding to the outcomes of participation activities. Much of the literature adopts rather generalized accounts of politicians and people as the principle actors of e-participation, reflecting an understanding of participation as an accommodation between people and their elected representatives. However, there is also focus on government institutions (which both promote and respond toe-participation) and voluntary organizations (whose political agendas which often represent nodes of participative pressure or influence).

CHAPTER SIX

E-PARTICIPATION FRAMEWORK EVALUATION: DELPHI METHOD

6.1 Introduction

This section describes the implementation of Delphi method. Delphi method is used in this study to evaluate the e-participation framework discussed in the above section, to examine constructs related to e-participation, and to uncover possible avenues to reach a better integration of the framework. Earlier, this chapter has discussed an e-participation framework in the public policy formulation and some integration of the building blocks within the field. As a result, the experts have decided to gather empirical support on some of these issues, and this section reviews their opinion on the original knowledge of the e-participation, which is the basic ability to manage public participation. This chapter also reviews how the constructs within the traditional public policy formulation might be integrated. By combining the findings from Chapters 5 and 6, Delphi method would provide a comprehensive picture on how the e-participation assists in formulating public policy.

6.2 The Delphi Method Process

There were several guidelines applied in this method. The following discussion provides guidelines for up to four iterations that are used to assist those who have decided to use Delphi method.

6.2.1 Expert Panel Selection

The Delphi does not call for expert panels to be representative samples for statistical purposes. Representativeness, it seems, is assessed on the qualities of the expert panel

rather than its numbers. Linstone (1978) suggests that "a suitable minimum panel size is seven" but panel sizes have ranged from 4 to 3000. Murphy et al. (1998) believe that the more participants there are the better, suggesting that as the number of judges increases, the reliability of a composite judgement increases. However, they also comment that: There is very little actual empirical evidence on the effect of the number of participants on the reliability or validity of consensus processes (Murphy et al., 1998). The whole premise behind the Delphi theory is that the panel members are in fact experts in their field in order to yield more accurate results. The criteria that qualifies an individual as a panel "expert" is determined by those administering the process (Cantrill et al., 1996). Representation is assessed by the qualities of the expert panel rather than its numbers (Powell, 2003).

The most appropriate panel members are potential users of the public policy formulation or also known as the people who are in-charge of the subject. The researcher made sure that the experts were familiar with the public policy formulation to ensure that they have an understanding about it. The experts were selected from different organisations as the crucial aspect of conducting a successful Delphi method is based on the selection of the respondents. Therefore, extensive care was taken during the recruitment of the experts.

Following these recommendations, a panel of seven experts was formed for the research project. All the selected experts for this study were carefully chosen with the specific goal to ensure heterogeneity in terms of the role they were chosen to play in the public policy formulation. Due to that, some of the experts were selected to be the

representative of government department. Table 6.1 lists down the experts involved in the Delphi method.

6.2.2 Qualifications of an expert

If the method is to be successful in achieving its objectives, it is important that expert panel members are willing and able to make a valid contribution. Jairath and Weinstein (1994) propose that participants should be experts who reflect current knowledge and perceptions, yet are relatively impartial to the findings. Murphy et al. (1998) conclude that diversity of expert panel membership leads to better performance as this may allow for the consideration of different perspectives and a wider range of alternatives. Most Delphi users suggest that experts should be chosen for their work in the appropriate area and credibility with the target audience. The whole premise behind the Delphi theory is that the panel members are in fact experts in their field in order to yield more accurate results. The criteria that qualifies an individual as a panel "expert" is determined by those administering the process (Thangaratinam and Redman, 2005).

Following Thangaratinam and Redman (2005), the researcher selected the experts based on their experience in formulating public policies. Specifically, these experts shall fulfil the following criteria:

1. They have experience in the process of formulating a public policy in their respective departments.
2. They have more than 6 year experience in developing policies, circulars, and working papers.

3. They have experience in directly communicating with the public to solve their problems.

4. They have experience in managing peoples' complaints

Table 6.1

Expert panel for Delphi Method

Name	Expert role	Department	Numbers of years involve in policy development	Nature of public policy handled
Mr. Norraffendy bin Abd. Khalid	Director	Registrar of Society Malaysia Selangor	8 years	1. Circular of Registrar No 1 2004 2. Circular of Registrar Delegation of Societies, No 1 2004
Mr. Mohamad Najib bin Mustafa	Director	Jabatan Ketua Pengarah Tanah dan Galian, Negeri Sembilan	7 years	1. Policy of National Rural Physical Planning Policy 2. Policy of National Housing
Mr. Alfian bin Mesebah	Vice Registrar	Institut Tadbiran Awam Negara (INTAN)	7 years	1. Policy of The Values of Islam in Administration 2. Policy of Reform and Increased Productivity and Quality in the Public Service

Name	Expert role	Department	Numbers of years involve in policy development	Nature of public policy handled
Mr. Aznirul Fariz bin Alwi	Assistant Secretary	Bahagian Kewangan Kementerian Pembangunan Wanita, Keluarga & Masyarakat	8 years	1. Policy of Welfare State 2. Policy of Children Protection 3. National Policy for the Elderly 4. Policy of Persons with disabilities
Mr. Wan Kamarul Afandi bin Wan Tajulruddin	Executive Officer	Cawangan Tidak Bermastautin Lembaga Hasil Dalam Negeri Malaysia	6 years	1. Policy of Taxation Limited Partnership Liability 2. Policy of Withholding Tax on Special Classes Income.
Mr. Asman Abdullah bin Hasrat	Assistant Secretary	Bahagian Perancangan Korporat Kementerian Kewangan Malaysia	9 years	1. Policy of Real Property Gains Tax Exemption 2. Policy of Structure Duty / Tax on Passengers Motor Vehicle 3. Policy of Stamp Duty Exemption for Residential Property purchase price not exceeding RM180,000
Ms. Suraya Mazni bte Suleiman	Assistant Director	Unit Pengurusan Teknologi Maklumat	7 years	1. Policy of Information and Communication Technology Security

6.2.3 Round 1

In the first round, the Delphi process began with a mixed of closed and open-ended questionnaire. The questionnaire served as the cornerstone of soliciting specific information about a content area from the Delphi subjects (Custer, Scarcella, & Stewart, l999). After receiving the subjects' responses, all the collected information was then converted into a well-structured questionnaire by the researcher and used as a survey instrument for the second round of data collection. This round is also known as the brainstorming round, in which the experts were asked to provide a broad understanding about public participation and e-participation in the public policy formulation.

6.2.3.1 First Round Questionnaire

The rounds of questionnaire were continued until a predetermined level of consensus was reached or no new information could be gained. This approach was considered to be the correct balance between striving for a useful consensus and ensuring a significant proportion of participation to complete the study. The initial questionnaire was developed through open-ended questions, and was aimed mainly on establishing the correct understanding about public participation in the public policy formulation. The open-ended questions were posed in order to tap respondents' ideas on "how can the public or communities help in enhancing the public policy formulation in terms of information?" Most questions are adapted from South Bay Salt Pond Restoration Project and Calabash Case Studies Public Participation in the SADC Region by Southern African Institute for Environmental Assessment. On the other hand, the closed-ended questionnaires focused more on strategies, culture, barrier, and role of

public participation in e-participation. Table 6.2 contains the questions included in the first round survey.

Table 6.2

First round survey questions

1.	Based on your view, what is the current status of citizen participation in government's public policy formulation?
2.	What do you think of public participation in public policy formulation?
3.	Currently, does government actively create and support public participation in public policy formulation?
4.	How much time does it take for you to get the relevant information to formulate public policy?
5.	Which one of the following strategies should be used by the Government for public participation in public policy formulation?
6.	Which of the followings BEST describes public participation culture?
7.	Please choose the three biggest cultural barriers in public participation in public policy formulation.
8.	To what extent do you understand the term 'Electronic Participation (e-participation)'?
9.	In your opinion, what should be the purpose of 'e-participation'?
10.	How significant is the role of effective public participation in achieving the best result in public policy formulation?
11.	What are the barriers that will be faced by the Government if they use e-participation for public participation?
12.	In your opinion, give the THREE biggest hurdles in effective implementation of e-participation in public policy formulation?
13.	In your opinion, how can the public or communities help in enhancing the public policy formulation in term of information?

The feedbacks from the questionnaire were then analysed and used to develop the second round's questionnaire. The following section provides a brief discussion on the feedbacks received from the first round questionnaire.

6.2.3.2 Feedback from the first round questionnaire

Majority of the experts stated that the current stage of public participation in the Government's public policy is at a nascent stage. This means that the public participation has somehow occurred, however it could still be enhanced on a higher level of participation. This is supported by their answer for question number 2. Most of them thought that public participation has already been initiated but it is just a matter of the term used (its name) that the public do not know or aware of.

They also stated that public participation is a strategic part of public policy formulation and is something that could be beneficial for the Government. They also added that it is quite important, relevant and new to the Malaysian Government to have a public participation in the public policy formulation. Furthermore, they take one month or more to get all the relevant information needed to formulate public policy. Figure 6.1 is a graphical representation of the experts' feedbacks on the strategies that should be used by the Government to encourage public participation in public policy formulation.
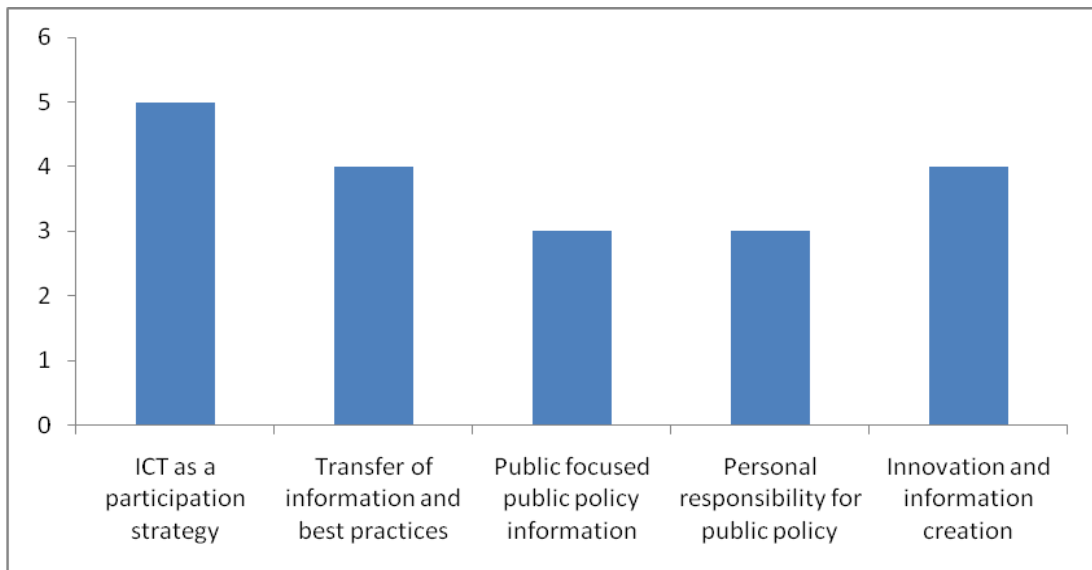
Figure 6.1. Strategies that should be used by the Government to encourage public participation in public policy formulation

Based on Figure 6.1, strategies that can be appropriately used by the Government is by focusing more on information that is voiced out by the public, while ICT can act as a link between the public and the Government to enable them to jointly participate in public policy formulation. In term of public participation acculturation, all of the experts thought that "they have an open, encouraging and supportive culture" by stating that "public participation is each and everybody's job, and so everyone has the best of information". However, most of the experts stated four possible obstacles that could hinder the public from actively getting involved in public policy formulation namely lack of trust, not willing to share information, lack of participation, and functional silos. Table 6.3 lists down the answers for the question "How significant is the role of effective public participation in achieving the best result in public policy formulation?" based on the feedbacks received from the experts.

Table 6.3

Significance of the role of public participation in public policy formulation

Most significant	To improve public focus
	Faster response to key policy issues
	To improve quality
	To improve service delivery
	To get better decision-making
	To achieve good governance
	To improve public-government interaction
	To have better planning
Average	To improve competitive advantage
	To obtain fairer conduct
	To improve commitment
less significant	-null-

Based on the analysis, the appointed experts had a consensus on the point of "To get better decision-making" and "To achieve good governance" which scored the highest significances. However, the experts stated that there will be barriers facing the Government if they are to allow public participation through e-participation platform.

Most of them stated that the major barriers are "lack of training", "lack of user uptake due to insufficient communication", and "Unsuccessful due to technical problems". One expert from the panel members stated that the barriers are at a minimal level because of the trend and growth of the ICT culture. Figure 6.2 shows the graphic representation of the experts' feedbacks on barriers in effective implementation of e-participation in public policy formulation.
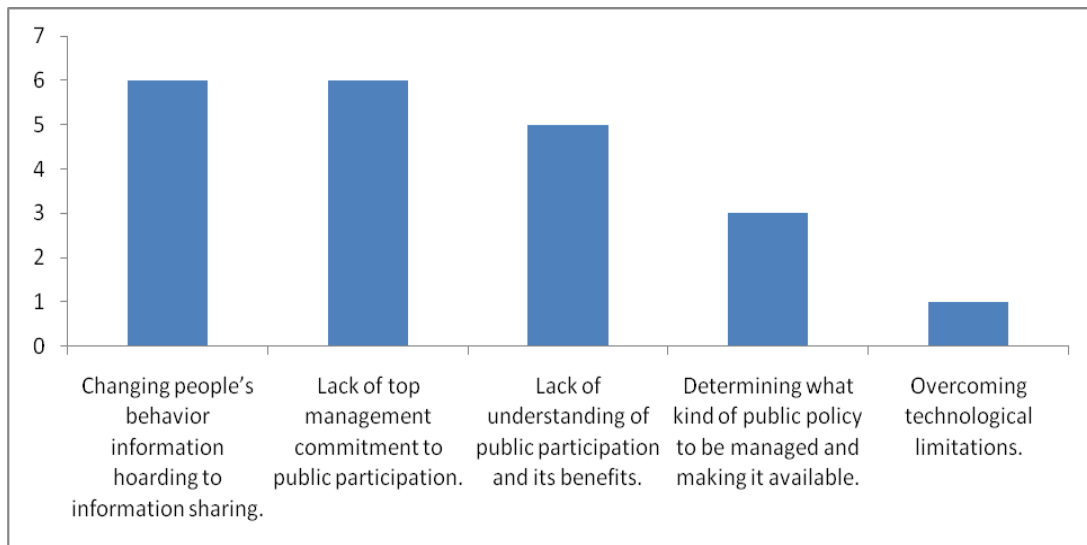
Figure 6.2. Barriers in effective implementation of e-participation in public policy formulation

As a conclusion for the first round of the Delphi method, the experts have given their general opinions about how the public can help to enhance the delivery of information related to the public policy formulation. Mr. Noraffendy bin Abd Khalid, Director, Register of Society Malaysia Selangor said that "as the phrase goes – 'it is the end of what the Government knows best'. The public, for example, the NGOs, are well-educated and most willing to participate in public policy formulation. It is well-timed that the public opinion is sought to enhance the public policy formulation". Meanwhile, Mr. Mohamad Najib bin Mustafa, Director of Jabatan Ketua Pengarah dan Galian, Negeri Sembilan noted "giving the true colour on what the Government is looking for". It means that the policy should be highlighted more by the public opinion (majority views). It is hoped that everything that is lacking and need to be adjusted in e-participation can first be cleared before it is even started.

6.2.4 Round 2

The second round questionnaire was developed from the feedbacks received from the first questionnaire. See Appendix for the second questionnaire. The feedbacks received from the first round were analysed and applied for the development of the second round questionnaire. The experts were given the opportunity to revise the feedbacks made in the first round. Further analysis was done based on open-ended questions posed in the first round questionnaire. After categorising the feedbacks, the experts were asked to rate the seriousness and criticality of obstacles hindering the citizen participation in public policy formulation that were identified in the first round. The round 2 questionnaire was developed using closed-ended questions, and was aimed mainly on consensus of elements in proposing e-participation framework for the public policy formulation process.

The main statistics used in Delphi method are measures of central tendency (mean, median, and mode) and level of dispersion (standard deviation and inter-quartile range) in order to present information concerning the collective judgements of respondents (Hasson, Keeney & McKenna, 2000). Subsequent iterations were to identify and hopefully achieve the desired level of consensus as well as to find any changes made by the experts. In some cases, as manifested by Murray and Jarman (1987), the mean is also workable. Witkin (1984) questioned the appropriateness of using mean to measure the subjects' feedbacks if scales used in Delphi studies are not delineated at equal intervals. In the literature, the use of median score, based on likert-type scale, is strongly favoured (Hill &Fowles, 1975; Eckman, 1983; Jacobs, 1996). As Jacobs (1996) stated, "considering the anticipated consensus of opinion and the

skewed expectation of responses as they were compiled, the median would inherently appear best suited to reflect the resultant convergence of opinion".

The researcher considered agreement as a concurrence of opinion, a compatibility of observations reached by a team of individuals acting as a whole; it may also be considered consensus. Disagreement is defined as a difference in opinion such that clash is caused within the team assigned to come up with a decision. The researcher defined consensus as a function of shared team feelings towards an issue. This "feeling" can be captured through an ordinal scale, specifically the likert scale, which measures the extent to which a person agrees or disagrees with the question. The researcher found that all these scales produce identical values for the consensus measure.

The use of mode is also suitable when reporting data in the Delphi process. ludwig (l994) specifically addressed that "the Delphi process has a tendency to create convergence, and though this was usually to a single point, there was the possibility of polarization or clustering of the results around two or more points. In these instances, the mean or median could be misleading". The standard deviation is the measurement of the variability in a population. For the purpose of this study, a decision was made on the level of consensus reached in terms of the standard deviation as described in the following table:

Table 6.4

Decision for level of consensus

Standards Deviation	level of consensus achieved
$0 \leq X < 1$	High level
$1 \leq X < 1.5$	Reasonable/fair level
$1.5 \leq X < 2$	low level
$2 \leq X$	No consensus

Source: Adapted from Grobbelaar, 2007

The following sections describe the feedbacks gathered from the experts in the Delphi method. The questions were posed to the respondents mainly to compile a list of possible alternatives to measure citizens' participation in the public policy formulation.

6.2.4.1 Feedbacks from the Second Round Questionnaire

In order to organise the results of the second round questionnaire of the Delphi method, five main building blocks from the e-participation framework were developed. The choice of these building blocks was directly correlated with the results obtained during the analysis of public policy case study. The result has been explained earlier in this chapter.

6.2.4.2 Round 2: Basic elements in E-participation Framework

The following closed-ended questions were posed to the experts in the second round survey:

Table 6.5

Question on the three elements of e-participation

Based on the following three elements of e-participation as depicted in Figure 2 (Figure 6.2). Kindly tick your responses as to whether these elements are necessary as a basis to shape the e-participation platform.

Ql. E-information - This section is to disseminate information to the citizen. It is a one-way interaction where the Government provides public policy information to the citizen, and they can go through it before participating in the public policy formulation.

☐ Strongly Agree

☐ Agree

☐ Uncertain

☐ Disagree

☐ Strongly Disagree

Q2. E-consultation - This section is a two-way interaction between the Government and citizens where citizens will be consulted regarding the public policy that will be formulated. All inputs are gathered as a source of reference in the E-decision making stage.

☐ Strongly Agree

☐ Agree

☐ Uncertain

☐ Disagree

☐ Strongly Disagree

Q3. E-decision making - This is a superlative level in e-participation. All inputs that have been analysed will be submitted for decision making by the Cabinet of Malaysia and Members of Parliament.

☐ Strongly Agree

☐ Agree

☐ Uncertain

☐ Disagree

☐ Strongly Disagree

In the development of the second round questionnaire, the ideas were generated from the analysis in the first round questionnaire and based on the e-participation framework proposed. In the second round questionnaire, the experts were asked to rate three basic elements of e-participation on a scale of 1 to 5 where 1 indicates 'Strongly Agree' and 5 indicates 'Strongly Disagree'.

1. E-information

This element relates to the lowest level of e-participation process in public policy formulation. It is more focused on disseminating information to the citizen. It is a one-way interaction where the Government provides public policy information to the citizen, and they can get to know it first before participating in the public policy formulation. Figure 6.3 shows a graphic representation of the feedbacks received from the experts regarding the e-information element.

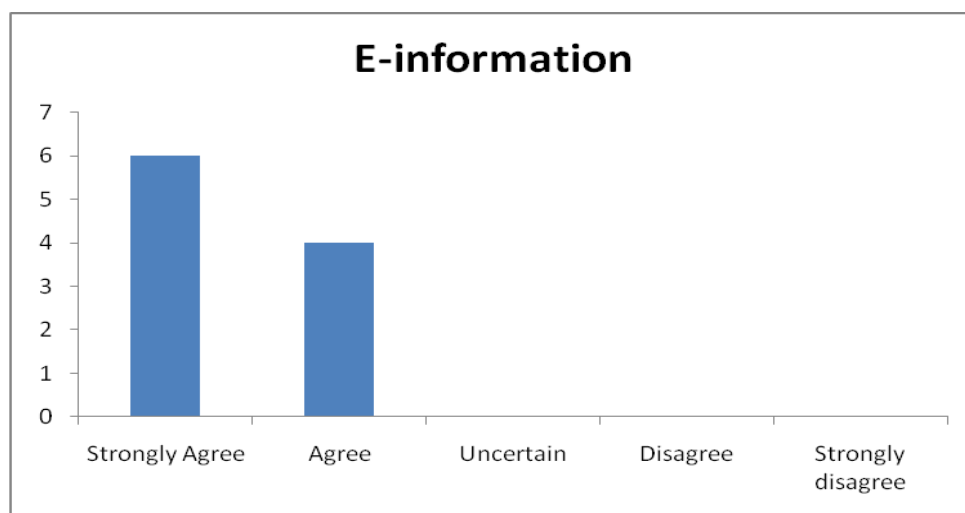*Figure 6.3.* Experts' feedbacks on e-information element in e-participation framework

A high level of consensus with standard deviation of 0.5l6 was achieved for this element. The aggregated experts' opinion is that the e-information should be an

element in e-participation framework in public policy formulation. All experts rated this as important (strongly agree and agree) in the e-participation framework.

2. E-consultation

This element relates to the second level of basic element of e-participation process in public policy formulation. This element is a two-way interaction between the Government and citizens where citizens will be consulted regarding the public policy that will be formulated. All inputs are gathered as a source of reference in the e-decision making stage. Figure 6.4 shows a graphic representation of the feedbacks received from the experts on the e-consultation element.

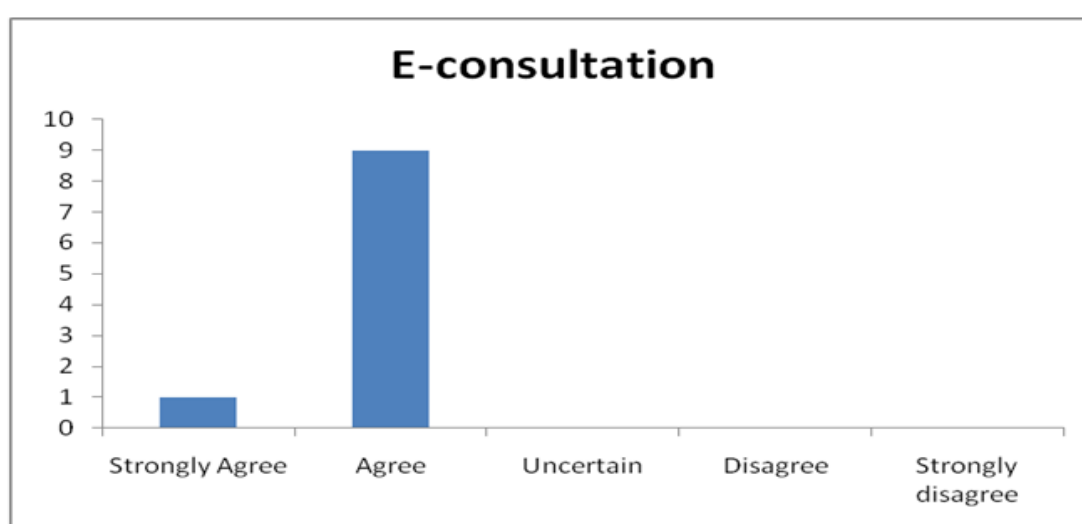*Figure 6.4.* Experts' feedbacks on e-consultation element in e-participation framework

A high level of consensus was achieved for this issue with a standard deviation of 0.3l6. The experts mutually agreed that this element should be included into the e-participation framework. This indicates that the e-consultation might remain be the basic element to e-participation framework in public policy formulation.

3. E-decision making

This element relates to the higher level of e-participation process in public policy
formulation. This element is a superlative level in e-participation. All inputs that were
analysed will be submitted for decision making by the Cabinet of Malaysia
Government and Members of the Parliament. Figure 6.5 shows a graphic
representation of the feedbacks received from the experts on the e-decision making
element.
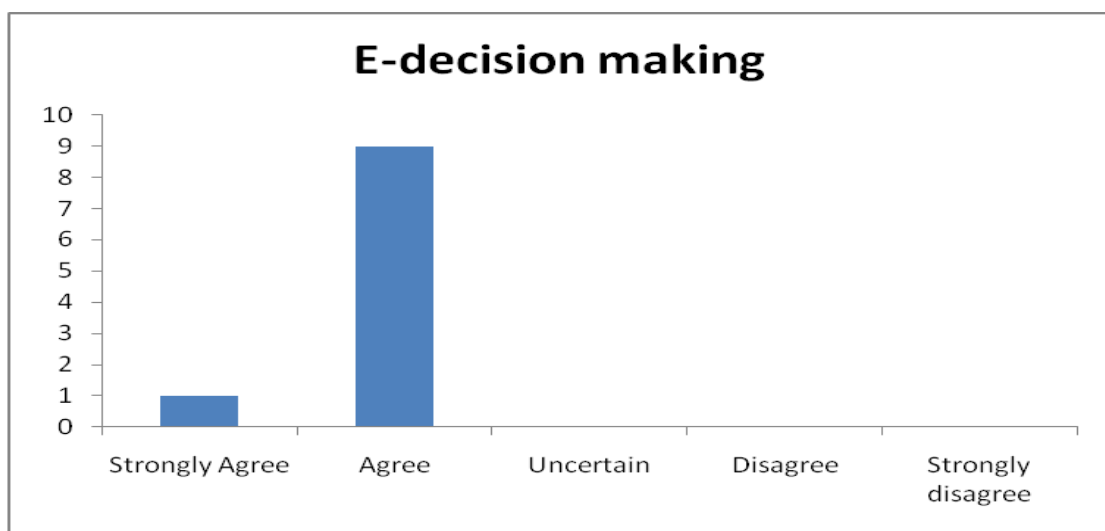
Figure 6.5. Experts' feedbacks on e-decision making element in e-participation
framework

A high level of consensus was reached with a standard deviation of 0.316. The experts
mutually agreed that this element should also be included into the e-participation
framework.

In conclusion, all experts agreed that the three elements of e-participation should be
included in e-participation framework as a basis of citizen participation process. The
following is a brief summary of the experts' opinion after the second round for the
three basic elements of e-participation framework.

Table 6.6

Summary of 3 basic elements of e-participation framework

Elements	Mean	Std. Dev.
E-information	1.40	0.516
E-consultation	1.90	0.316
E-decision making	1.90	0.316

6.2.4.3 Round Two: Building Blocks of E-participation Framework

Based on the e-participation framework above, there are 5 building blocks that have been identified, namely Community, Organisation, Document, Delivery Method, and Technology. All building blocks support each other based on their respective roles. The experts gave their opinions on the applicability of using scientific output as a measure of building block in e-participation framework.

1. Community building block

The role of the community building block is as an input giver to the public policy that will be shaped by the Government. This building block is a major element to the e-participation in the Government's public policy formulation. Figure 6.6 below indicates the groups of actors that should be included in the community building block.

Standard Deviation
Media: 0.675, Political parties: 0.422, NGOs: 0.483, Interest group: 0.3l6,
Individual: 0.422
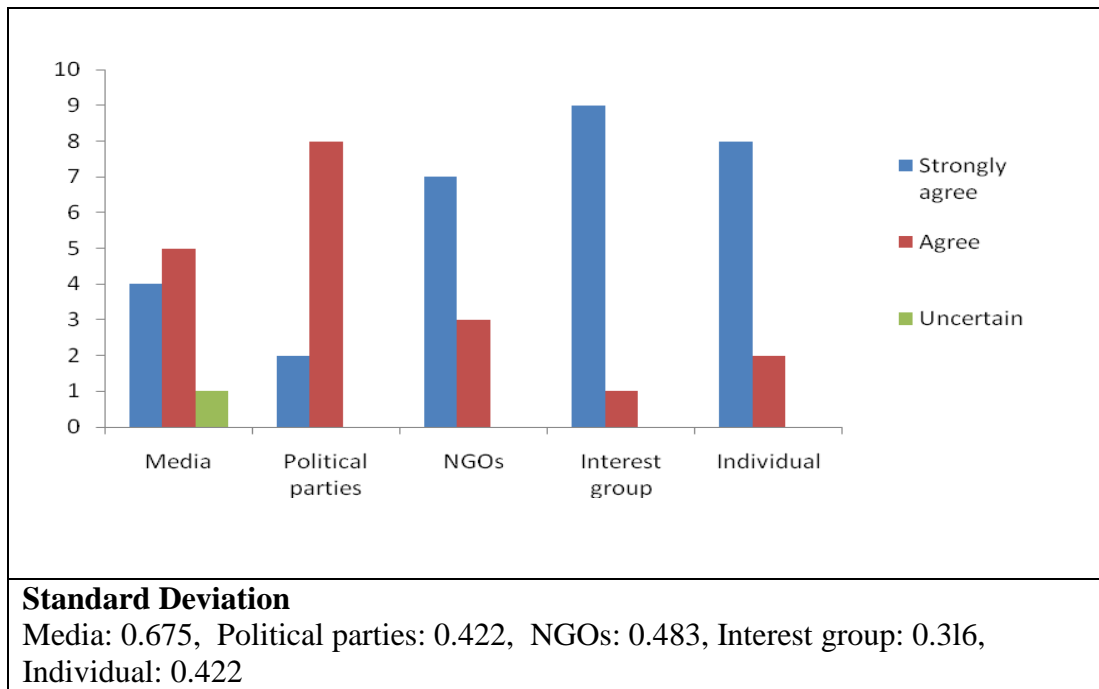
Figure 6.6. Groups of actors that should be included in the community building block

Based on the consensus table shown in Figure 6.6, a high level of consensus was
achieved with a range of standard deviation from 0.316 to 0.675. A substantial
number of the experts rated this as the main element that should be included in the
community building block. The experts' opinion indicated that participation from the
actors in community building block will improve the competitive advantage of public
policy, integrate knowledge and information within government agencies, and
improve knowledge and information shared or transferred within government
agencies. Table 6.7 below represents the feedbacks received from the experts.

Table 6.7

Feedbacks received from the experts on participation from the actors in community

building block

Q4(l) Improve the competitive advantage of public policy.		Frequency	Percent
Valid	Strongly agree	2	20.0
	Agree	8	80.0
	Total	10	100.0
Q4(2) Integrate knowledge and information within government agencies.			
Valid	Strongly agree	5	50.0
	Agree	5	50.0
	Total	10	100.0
Q4(3) Improve sharing or transferring knowledge and information within government agencies.			
Valid	Strongly agree	4	40.0
	Agree	6	60.0
	Total	10	100.0
Q4(4) Increase efficiency by using information to improve public policy formulation.			
Valid	Strongly agree	5	50.0
	Agree	5	50.0
	Total	10	100.0
Q4(5) Increase citizen acceptance of public policy.			
Valid	Strongly agree	4	40.0
	Agree	5	50.0
	Uncertain	1	10.0
	Total	10	100.0
Q4(6) Identify strategic information present in public policy.			
Valid	Strongly agree	3	30.0
	Agree	7	70.0
	Total	10	100.0
Q4(7) Promote sharing or transferring information with citizen about the suggested public policy.			
Valid	Strongly agree	2	20.0
	Agree	8	80.0
	Total	10	100.0

The experts also agreed that participation from groups in the community building block in public policy formulation will increase the effects of its implementation. Among the effects are increased citizen acceptances towards public policy, strategic information present in public policy can be identified, and promoting sharing of information with citizen about suggested public policy.

All of the experts agreed that public policy mission, vision, and value from that particular public policy should be shared with the citizens. A high level of consensus was achieved on this question with a standard deviation of 0 to 1 for each element. Figure 6.7 shows the feedbacks received from the experts on the mission, vision, and value of public policy.
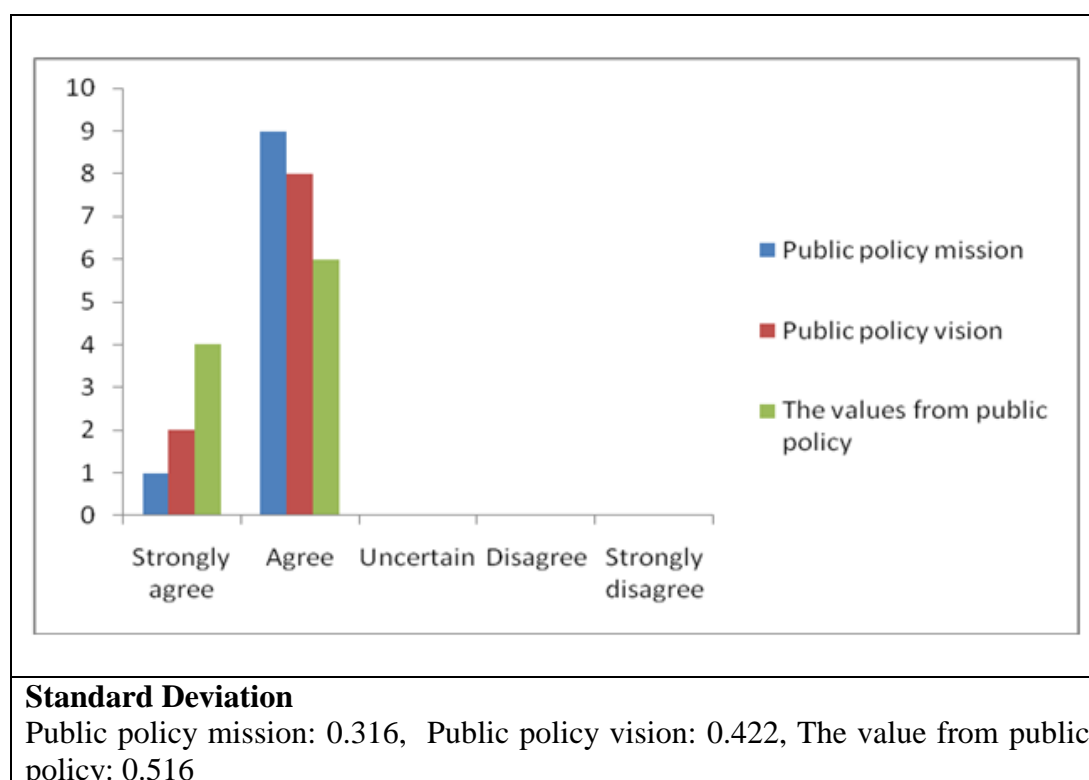

Standard Deviation
Public policy mission: 0.316, Public policy vision: 0.422, The value from public policy: 0.516

Figure 6.7. Feedbacks received from the experts about the Government's public policy mission, vision, and value

2. Organisation building block

The role of the organisation building block is to assist policy maker in formulating public policy. Generally, the groups formed in organisation building block are responsible with the public policies that are to be formulated. There are four main elements in this building block. The first one is Decision Making Group that consists of the Cabinet, the Parliament, and the King. The role of this group is to act as the decision maker on public policy that will be implemented by the Government. However, this role will sometimes differ based on the public policy requirements. The second element is Spokesperson Group that consists of committees formed by the Government to formulate a public policy. This group is represented by the IAPGs. IAPGs are a group that consists of experts representing a ministry. IAPGs are responsible in planning and formulating public policy.

The third element is Executive Group that consists of representatives from several government agencies involved in managing public policy. This group assists the Spokesperson Group to formulate a public policy. Finally, the fourth element is Technical Group whose role is to look at the technical aspects of the public policy that is going to be formulated. This group will also assist the Spokesperson Group (IAPGs) to focus on the inputs from the publics' feedbacks. The roles of the Technical Group are exclusive to the e-participation platform in delivering and receiving information from the community building block. They will also forward information from the community building block to the Spokesperson Group. Figure 6.8 shows a graphic representation of the feedbacks received from the experts on the four main elements in organisation building block.
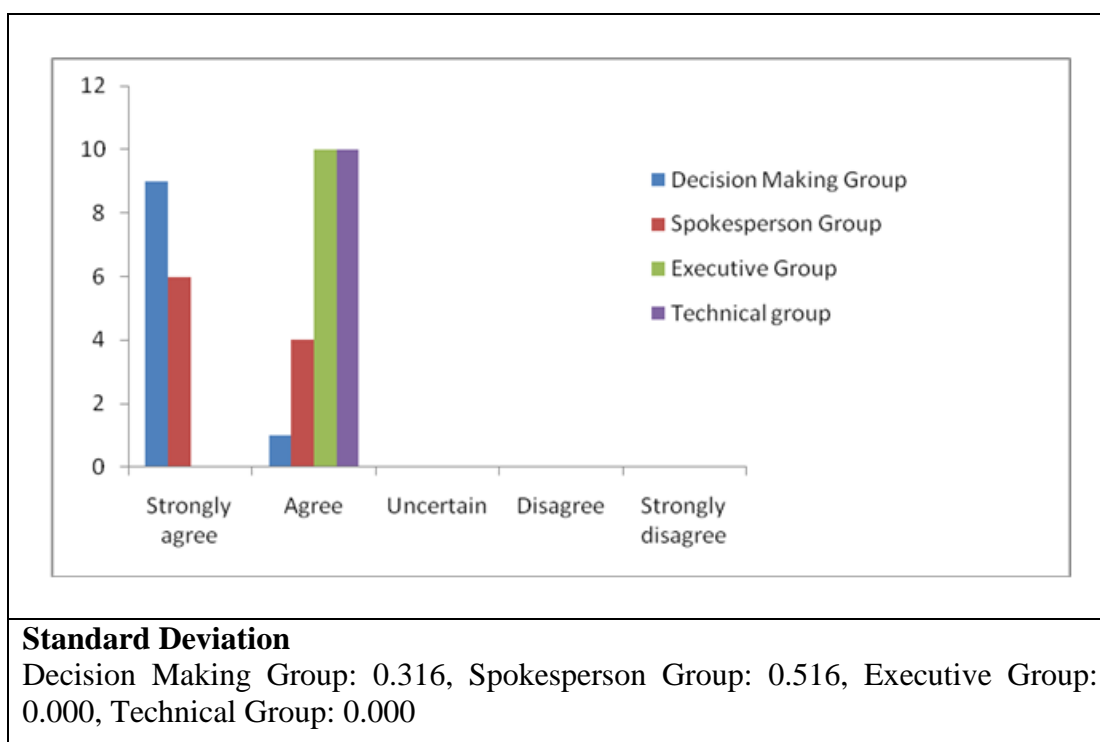
Standard Deviation
Decision Making Group: 0.316, Spokesperson Group: 0.516, Executive Group: 0.000, Technical Group: 0.000

Figure 6.8. The feedbacks received from the experts on the four main elements in organisation building block

Most of the experts agreed with the organisation building block presented. This is supported by the high level of consensus with a standard deviation of 0.00 to 0.516 for each group.

3. Documentation building block

Documentation building block acts as a communication medium for the delivery of the public policy between the Government and citizens. There are five main documents in this building block and each document has its own purpose. First document is Public Policy Draft Plan. This document is issued by the Spokesperson Group to community building block. It is a public policy proposal that will be formulated by the Government. This is to allow the community building block to understand the public policy that is going to be formulated by the Government.

The second document is a Public Notice. It is an early notice or announcement notice to the community building block about public policy that is going to be formulated. This is to enable the community building block to provide some views, opinions, and ideas on the proposed public policy. The third document is Public Discussion Report. This report will be issued by the Technical Group after getting the feedbacks from the community building block. This report represents the inputs for Spokesperson Group from the community building block. The fourth document is Public Policy Suggestion report. It is a public policy that is released after consideration from the community building block. This report will be examined again by the community building block, whether to accept it or to reject it. If it is rejected, it would be reopened for the community building block to get their views again.

The fifth document is the Public Policy Final Report. This document is the final complete public policy after gathering all the inputs from the community building block. This final public policy report will be sent to the Decision Making Group (the Cabinet) for approval process and to be forwarded to the community building block as a reference. Figure 6.9 shows a graphic representation of the feedbacks received from the experts regarding the five main elements in the documentation building block.
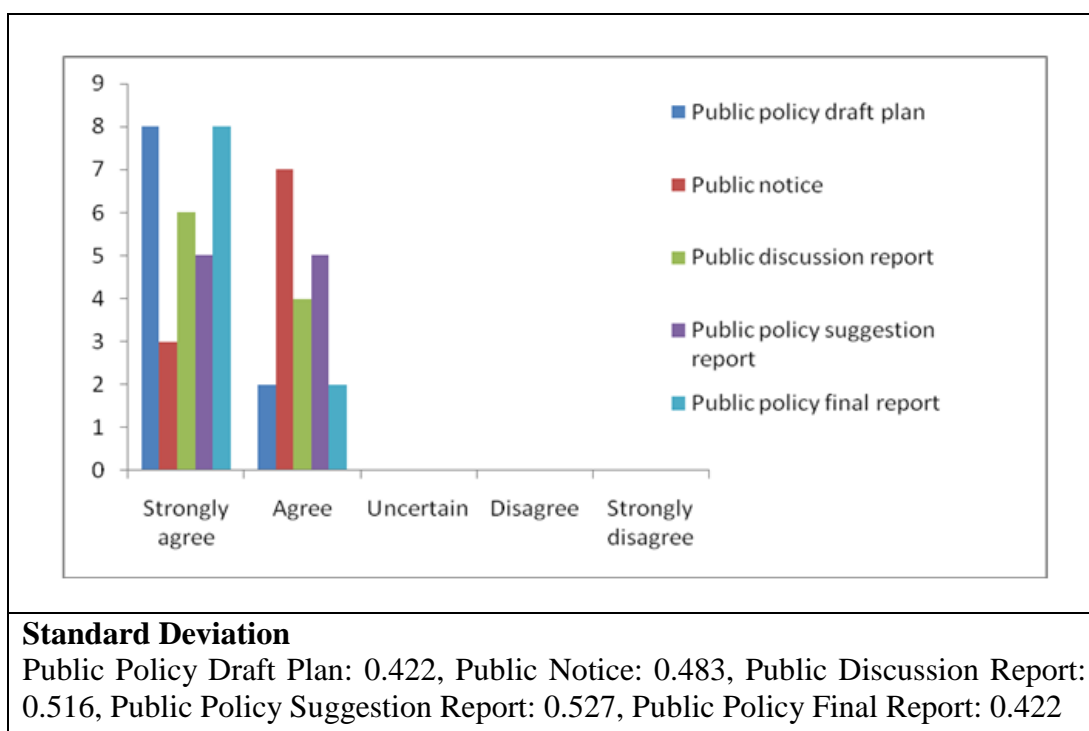
| Standard Deviation |
| Public Policy Draft Plan: 0.422, Public Notice: 0.483, Public Discussion Report: 0.516, Public Policy Suggestion Report: 0.527, Public Policy Final Report: 0.422 |

Figure 6.9. Five main elements in organisation building block

A high level of consensus was achieved on the five main documents in documentation building block with a standard deviation of 0.422 to 0.527. All of the experts rated all the documents as significant (Strongly Agree and Agree) to the documentation building block.

4. Delivery method building block

Delivery method building block provides the tools for citizen participation in the public policy formulation. The tools fit with the community building block for delivering their views, opinions, ideas or comments as inputs to the public policy that is going to be formulated. There are ten elements in delivery method building block as shown in Figure 6.10 below:
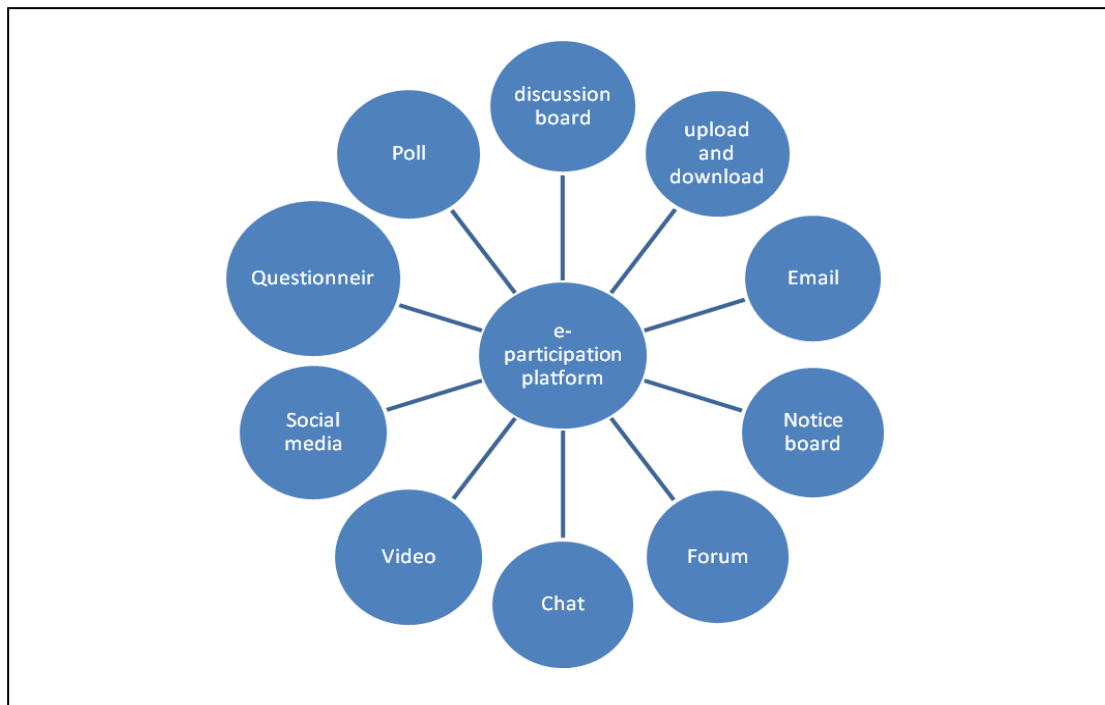
Figure 6.10. Delivery method building block and e-participation platform

Based on the feedbacks from the experts, all of them agreed with the delivery method building block. Table 6.8 shows the feedbacks received from the experts on the elements in delivery method building block.

Table 6.8

Feedbacks received from the experts on the elements in delivery method building block

Poll		Frequency	Percent	Standard Deviation
Valid	Strongly agree	3	30.0	0.483
	Agree	7	70.0	
	Total	10	100.0	
Discussion Board / Comment				
Valid	Strongly agree	3	30.0	
	Agree	7	70.0	0.483
	Total	10	100.0	

Upload and Download					
Valid	Strongly agree	2	20.0	
	Agree	8	80.0	0.422
	Total	10	100.0	
Email					
Valid	Strongly agree	6	60.0	
	Agree	4	40.0	0.5l6
	Total	10	100.0	
Notice board					
Valid	Agree	9	90.0	
	Uncertain	1	l0.0	0.3l6
	Total	10	100.0	
Forum					
Valid	Strongly agree	3	30.0	
	Agree	6	60.0	0.632
	Uncertain	1	l0.0	
	Total	10	100.0	
Chat					
Valid	Strongly agree	2	20.0	
	Agree	8	80.0	
	Total	10	100.0	0.422
Video					
Valid	Agree	9	90.0	
	Uncertain	1	l0.0	
	Total	10	100.0	0.3l6
Social media					
Valid	Strongly agree	1	10.0	
	Agree	9	90.0	0.3l6
	Total	10	100.0	
Questionnaire					
Valid	Agree	l0	100.0	0.000

Based on Table 6.9, a high level of consensus was achieved on the elements in delivery method building block with standard deviation of 0 to l for every element. Therefore, it can be concluded that all elements should be included in the e-

participation framework under method delivery building block. The experts also agreed with the roles played by the delivery method building block. Some of the roles provide an online communication tools for interaction purpose, supporting online tools, supporting notification tools, applications for online survey purpose, and preparing document management tools.

5. Technology building block

The purpose of the technology building block is to support the citizen participation from community building block in the public policy formulation through e-participation platform as a whole. It is normal for the community building block to participate online. Figure 6.11 below shows the relationship between technology method building block and e-participation platform.
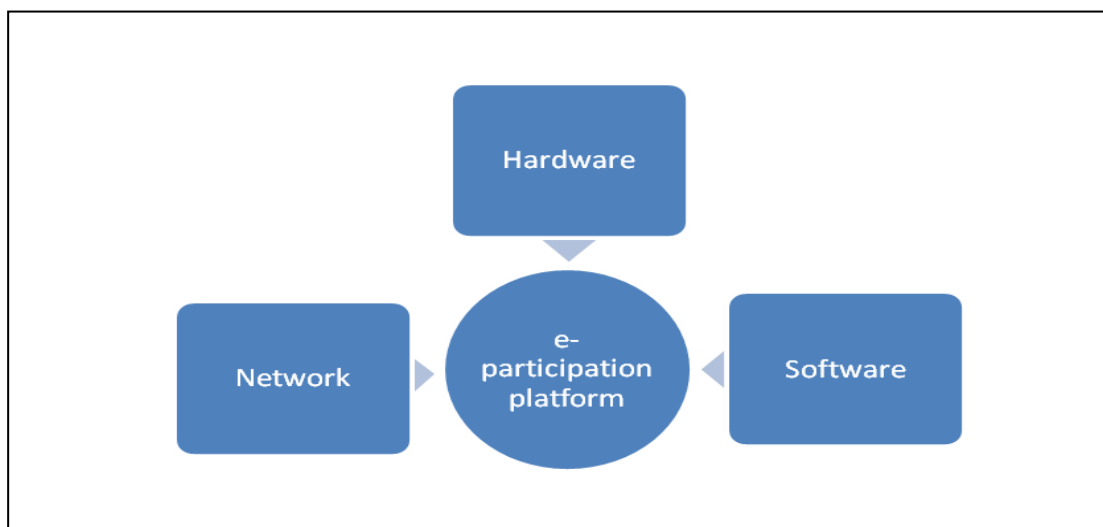

Figure 6.3. Technology building block and e-participation platform

Figure 6.12 shows a graphical representation of the feedbacks received from the experts on the elements in technology building block.
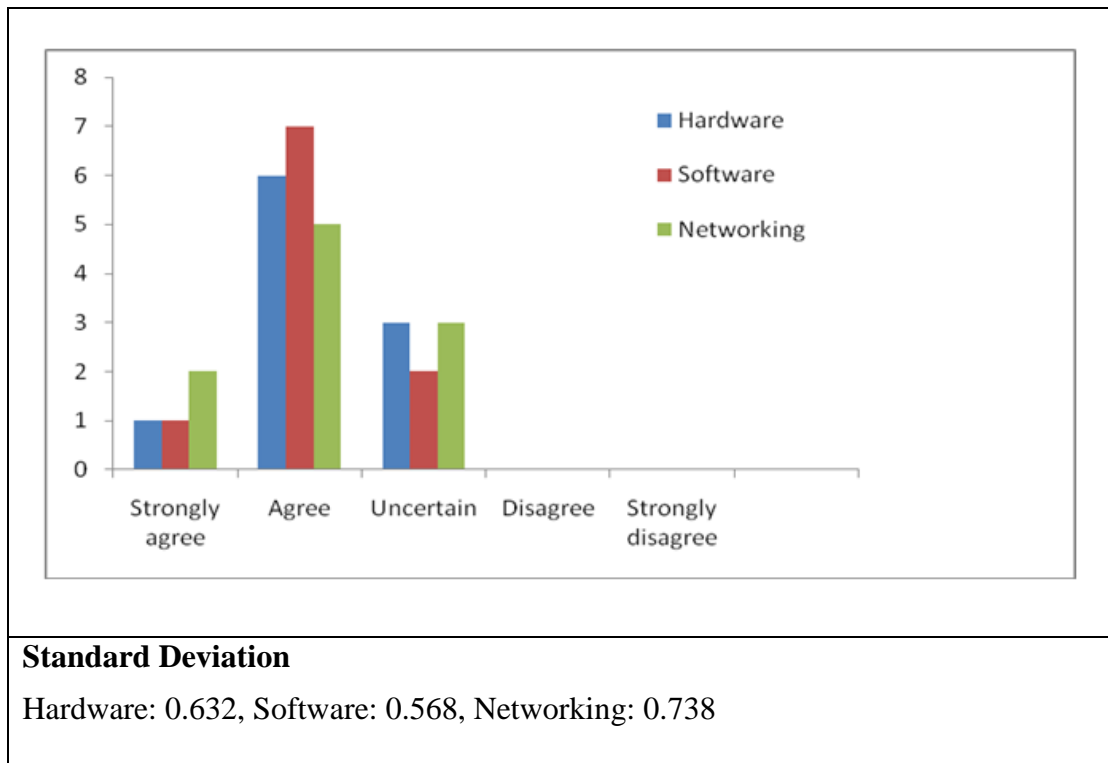
Standard Deviation
Hardware: 0.632, Software: 0.568, Networking: 0.738

Figure 6.4. Feedbacks received from the experts on the elements in technology building block

A high level consensus was achieved on elements in technology building block with standard deviations of 0.632, 0.568, and 0.738 for hardware, software, and networking, respectively. All experts rated technology building block's elements from "Strongly Agree" to "Uncertain". Based on Figure 6.12, it can be concluded that the majority of the experts agreed with those elements.

6.3 Conclusion on Experts' Opinion

The analysis of the results section yields a conclusion that there is a reasonable overall level of agreement among the experts. Generally their views inclined towards supporting the establishment of building blocks in e-participation framework. These building blocks act as keys of e-participation framework to encourage the public to

participate in online public policy formulation. Figure 6.13 shows the experts' opinion on five building blocks in e-participation framework.
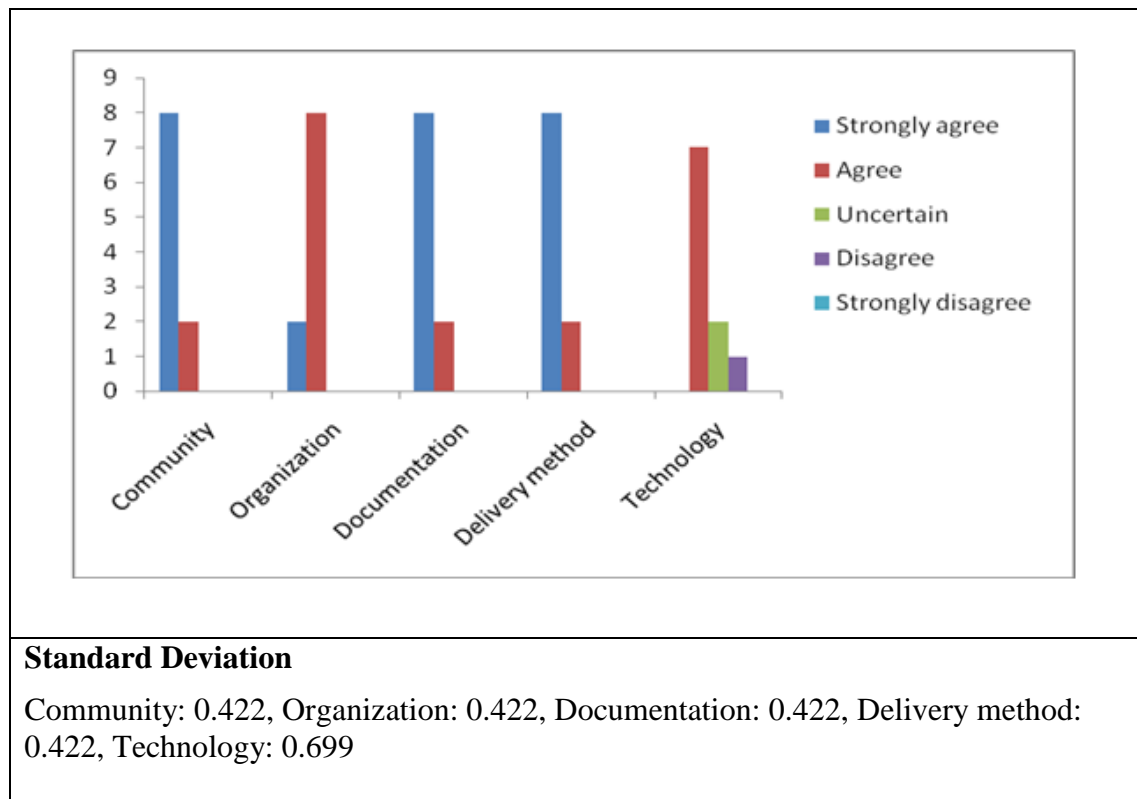

Standard Deviation

Community: 0.422, Organization: 0.422, Documentation: 0.422, Delivery method: 0.422, Technology: 0.699

Figure 6.5. The experts' opinion on five building blocks of e-participation framework

The level of consensus achieved by the experts was measured by considering the standard deviation for the opinion. It can be concluded that there was an overall high level of agreement on the suggestion on building block in e-participation framework. However, technology building block received quite different opinions by the experts. Based on the feedbacks, some experts disagreed with the technology building block. One of the experts commented, "In my point of view, this (technology) building block is other part of e-participation platform. I think the suggested e-participation framework should be more focused on the process itself, not to the platform of e-participation. However, the other 4 building blocks are very reliable for e-participation framework". Another expert also commented, "In my opinion,

technology building block is not a main process in e-participation compared to the other building blocks. This technology is a compulsory element when it comes to 'e'. So my suggestion is that this technology building block can be there or otherwise". Another comment from one of the experts shared the same idea about the technology building block, "It should not be in e-participation framework as a main building block because it just acts as a supporting element to the framework itself".

In conclusion, a high level of consensus was achieved in the second round questionnaire. However, bear in mind that the existence of a consensus does not necessarily mean that the correct answer, opinion or judgement has been identified. The real significance of the outcome of this study must be kept in mind. The experts agreed that all the suggested building blocks in e-participation framework are important.

6.4 Conclusion

Delphi method is a part of evaluation of consensus that highlights on agreement of expects. Nowadays, Delphi method is seen as a translator and analyser method for researcher to see the agreement between them about solution of a problem. Delphi method is used and implemented not only in the field of management but also in information technology and system as well. Due to this, this framework evaluation chose to apply the Delphi method. The problem is related to Delphi method as this issue requires a consensus between experts to agree about the result that suggested.

CHAPTER SEVEN
SUMMARY, CONTRIBUTION, DISCUSSION, RECOMMENDATION AND CONCLUSION

7.1 Summary

The purpose of this thesis is to develop a solution to enable citizens' participation in Malaysia's public policy formulation as a service that is readily available across the country. To achieve this aim, an e-participation framework for public policy formulation has been proposed. The researcher also developed the enabling mechanisms for realizing the framework. These mechanisms include the perception of the citizens and the processes involved in public policy formulation. Three primary research questions were set for this study:

- What are the perceptions of students on their participation in public policy formulation?

- What are requirements for an e-participation framework?

Based on that, the main research question is as follows:

- How can the current processes of public policy formulation be enhanced through the e-participation approach?

The main objective of the research is to propose a framework to implement e-participation in public policy formulation processes. To achieve this, the following sub objectives have been formulated:

- To obtain the perceptions of students on public policy formulation of the Government in terms of e-participation.

- To measure students' satisfaction with the current e-participation implementation employed by the Government.

- To identify the requirements for e-participation framework.

- To propose a framework for implementing e-participation for public policy formulation processes.

For this study, 6l7 respondents were selected through a stratified random sampling. The final usable response rate was 57.8% (n=3l0) for male and 42.2% (n=226) for female respondents. The data collection instrument was a questionnaire with 36 questions ― four demographic questions and 32 survey questions.

The findings on research question and objective one were summarized as follows:

(l) Respondents showed positive perceptions on public participation in public policy formulation.

(2) Respondents had more positive perceptions with regards to the public policy that has been formulated with public participation.

(3) Respondents were more concerned about bureaucratic red tape in conveying their opinions.

(4) Respondents commonly reported that there are three criteria that enable public to participate, in the process, namely Accessibility, Responsiveness and Transparency.

(5) Respondents showed that the current level of participation is at Informing level with frequencies of 284 (53%). Their expectation for the next few years is up to Consulting level of participation.

(6) Males and females showed similar attitudes on the type of attraction to participate in public policy formulation process. They agreed that they are attracted to participate due to the policy topic discussed.

(7) Respondents showed a similar level of positive perceptions towards benefits to government and public if people were to participate in public policy formulation.

Concerning research question and objective two, this study investigated the requirement of e-participation framework. The discussions on the requirements for e-participation framework are discussed in Chapter 5. The current requirements have no variations and complexities that, to the researcher's knowledge, are sufficiently focused upon attracting the citizens to participate in the process.

For research question and objective three, the researcher proposed relevant solutions towards realizing this question. Based on the requirement in Chapter 5 and using Actor Network Theory (Callon and latour, l986) as a tool, the researcher develops the proposed e-participation framework in public policy formulation. This proposed e-participation framework was evaluated by several experts to obtain their consensus about the framework. The researcher used Delphi Method to achieve consensus from the experts in order to support the validity of the e-participation framework.

Based on the processes that have been conducted throughout the research, the entire objectives have been achieved. The outcomes of the research are mostly in line with the previous studies (OECD, 200l; Macintosh, 2004; United Nations, 2004; Tambouris et al., 2007; Phang and Kankanhalli, 2008; and Islam, 2008). However, the outcomes slightly differ as it depends on the respective country's political structure. The researcher's contribution to the growing research body within the study field is by proposing an e-participation framework in public policy formulation. However, the researcher's intention was to go deeper into the discussion since the researcher wanted

to investigate in depth on how the e-participation framework can assist the process of citizens' participation in public policy formulation. The researcher has also discussed this in theoretical perspectives.

In practice, to develop any e-participation platform, the e-participation designers are supposed to deliver a platform intended to do certain things, however they discover that people are not inclined to use the system as anticipated. Users tend to find their own ways of using and utilizing the system, instead of making use of the predefined functions. If e-participation is in a similar way presented as a designed system which has to be introduced, there is a risk that it might not work as anticipated. The problems experienced in achieving a functioning support and acceptance for participatory activities may thus originate from how we choose to define and set up e-participation platform, rather than from the main activity of choosing which design or what kind of technical solution should support the activities.

Although Malaysia has a growing trend of participation in public policy formulation, only recently it becomes possible for citizens to oversee the actions of the executive, judiciary, and legislative branches. In the past, citizens' participation in providing support to the Government in public policy formulation was restricted.

Inspiration of ICT to improve the quality of public policy formulation have been discussed and converted into actual practice. On the other hand, the current number of countries that enables citizens' participation in the government service is about l93 and is expected to increase rapidly (United Nations, 20l2). To tailor the public participation for a wide range of Malaysian citizens with varied user preferences, e-

participation framework is necessary. Many of the existing frameworks available in the literature are based on their scope of study. The researcher has reviewed and compared four e-participation frameworks; each has some weaknesses in their proposed framework. One important issue in proposing an appropriate e-participation framework is that it depends on the political structure of the particular country and may not be suitable for those without a democratic environment.

Apart from that, there exist some people or interest groups that do not set the process of joining public policy formulation as their "priority". In order to overcome these issues, the idea of establishing e-participation framework has been proposed. In the thesis, public policy formulation interconnection with citizen participation is termed as "e-participation framework". In this context, the researcher has identified the research problems in order to address the core issue of citizen participation. The researcher set two goals to address these key issues which are to obtain the perception of citizens on public policy formulation of the Government in terms of e-participation and to explore the current practice of public policy formulation processes.

To address this, questionnaire and ANT are used. These investigations are being conducted to serve as the basis for the proposed e-participation framework in Malaysian public policy formulation. The analysis of the existing work in relation to e-participation exposes that only rudimentary frameworks exist (Rifkin et al., 1998; OECD, 2001; Macintosh, 2004; United Nations, 2004; Tambouris et al., 2007; Phang and Kankanhalli, 2008; and Islam, 2008). Moreover, there is a challenge for some countries in realizing e-participation. This challenge led to the development of participation environment to assist the citizens in managing public policy.

The proposed e-participation framework needs to attain scalability and flexibility. Based on this framework, the suggestion building block (Community, Organization, Document, Delivery Method, Technology) should get together in the e-participation environment. Also, this framework promotes the idea of every people have their own right in voicing their opinions to the government in formulating a public policy. Establishing e-participation platform as a service allows the participation of a large number of citizens located in different places in the network. Thus, the applicability of this thesis in theoretical context is validated.

This research on e-participation focused on public policy formulation in Malaysia. The research was divided into three tasks. The first task is to work towards a normative definition for direct and meaningful participation based on theories of deliberative democracy. The second task is to identify and describe the public policy formulation and the participatory mechanism that is in place. Finally, the third task is to examine the potential of public participation in the form of e-participation by looking at how ICT and Internet can be utilized.

To summarize, the analysis of this thesis combines both empirical findings and practical-based concepts derived from theoreticians. All these have provided the researcher with a theoretical basis for discussing participation from various perspectives. A theme for these theoreticians is their combined interest inhuman agency and structures related to processes of change. The researcher's theoretical and methodological choices support the basic aim of utilizing Actor Network Theory (ANT) as an approach to translate the current process of public policy formulation

and using the Delphi Method to get a consensus of the proposed e-participation framework from the experts. With these contributions, this thesis highlights some issues for future research in relation to citizens' participation and e-participation mechanisms.

7.2 Contribution

Citizens do not make policy or make final decisions, but they can contribute and influence a policy or decision. The major difficulty is to bring them 'in' to speak. This is not primarily an ICT problem, but how ICT can facilitate and promote the evolving notion of citizens' participation in shaping the policy. This study aims to provide new theoretical and empirical contribution to the emerging discipline of technology and sociology in citizens' participation. Currently, to the best knowledge of the researcher, there are no studies analysing e-participation in socio-technical settings in Malaysia.

Actor Network Theory (ANT) is one of the theoretical bases for cross-discipline socio-technical research in citizen participation to introduce and implement e-participation. It supports socio-technical theoretical basis of technical solution and their implementation. So, a combination of benchmarking (e-participation framework) study, questionnaire, and current practice of public policy formulation processes provide a new framework to implement e-participation in socio-technical setting.

The main contribution is the application of ANT in investigating public policy formulation processes is to enhance the e-participation concept. ANT provides a robust framework to support the study of human and non-human interactions in

socio-technical settings. The researcher integrates the concept of translation from ANT into public policy formulation processes in a framework called e-participation framework. The framework was presented based on analysis that was focused on problem identification and solution. The development of this framework represented an extension of knowledge in ANT.

Another contribution of this study is the knowledge on the current practices of public policy formulation processes in Malaysia. The researcher revised the practices of public policy formulation, its stages and activities that can enhance e-participation. The researcher also provided recommendations on how to improve the practice of public policy formulation processes in a case that involves multiple numbers of actors.

The last but not the least contribution of this study is the proposed e-participation framework. It was designed based on the involvement and actions of actors and was emphasised on local Malaysian situation. The framework worked as a design tool to guide the Government to implement e-participation in public policy formulation processes.

7.3 Discussion

At the county level, the public need to be primarily involved in the policy making process. While there is a statutory requirement for the public to be involved in this process, current methods of involving the public are often limited in both extent and effect, and are often determined by the organisational structures within a county

(Forester, l999). Increasingly, it is being argued that online public consultation exercises can be used to augment traditional methods of participation. The bottom rungs of the ladder of e-participation are a basic website and access to a database that can be reached by the majority (Kingston, 2002).

The e-participation framework (Aizi, 20ll) is a broad framework of public participation in public policy formulation, with scientific know-how and tools being made accessible to "average" citizens and lay people. Additionally, the e-participation framework shows that the ladder of e-participation can be ascended if interactive features and two way communications are included.

Dahlberg (200l) has shown how a cyber-forum as a form of online discourse can extend the public sphere. One of the Internet's real powers as a democratising force is that is has the capacity to educate large segments of the population at minimum cost. Although e-participation should not be regarded as the panacea for a lack of direct and meaningful public participation in policy making, it is clear that as a developing tool, it has the potential to inform the public on its related processes and policies.

One of the weaknesses of a direct and meaningful public participation is that only a small part of the population is involved in the mechanisms of public policy formulation, while the larger part of the population is excluded, hence bringing the question on the democratic legitimacy of these mechanisms (for examples focus groups and citizen panels). Johnson (l998) argued that in administrative rule making, where there has been a move towards informal adjudication and interpretative rules, ICT has increased the public accessibility to the development of agency policy. In

fields such as local government decision making, the Internet is a very powerful vehicle for disseminating information and increasing public participation. While face-to-face interaction cannot be replaced, development of e-participation framework to a more deliberative level might in time show how democracy can be strengthened and participation be made more direct and meaningful.

This research has painted a picture of public participation at the local level in the public policy formulation. In order to achieve this, the basics of the public policy formulation have to undergo a whole reformation process including reforming the traditional mechanisms as well as those that are more direct and meaningful; looking at where in the policy process participation is utilised at the county level; identifying the sort of groups and individuals that are most active; and whether cooperation is viewed as positive. In short, "who does what to whom in what channel and to what effect". However, this overview is only the first step, and has to some extent included an in-depth study on "direct and meaningful" participation as defined above. It has also made it difficult to draw explicit conclusions from the research.

Rather than general socio-political variables such as using urban/rural dwellers and population growth, it would have been interesting to look at actual initiatives in place. For example, does a county have a local land use management policy? Do ordinances for specific management practices and protection measures exist? These factors were then used as the independent variables and the different aspects of participation can be regressed against them. Additionally, the independent variable chosen could have been expanded to include other socio-economic and political variables such as income, education, percentage turnout in election, and membership in civic

organisations. Abel et al. (l998) looked at civic factors in local environmental policy and developed a measure of "civicness" of a community. To allow for direct comparison between counties, a participatory ranking or scaling could have been developed using principle components analysis on the aspects of participation identified through the survey.

The analysis was finally led to the conclusion that e-participation is something which is not possible to be fully achieved by following an oversimplified model or pre-defined path to improvement.

7.4 Recommendation

In order to investigate the nature of direct and meaningful participation in the public policy formulation more thoroughly, detailed case studies need to be conducted. By focusing on a narrower selection of issues, comparisons can be made and the processes can be understood. The case should be reviewed according to presence or absence of the four criteria for direct and meaningful participation. An example is by taking public participation in the issue of teaching and learning science and mathematics in English by the Ministry of Education.

This research is a small step in linking participation and policy outcomes effectively. linking the technical and sociological is not an easy task, but unless public participation is solely an exercise in legitimisation, then substantive results need to be measurable as well. Again, this calls for a narrower research base. Public participation would be one of the independent variables together with a selection of socio-economic, political and physical variables set against a socio-technical measure of

participation in public policy formulation. This calls for an interdisciplinary research team in order to establish adequate measures of environmental change that can be used to evaluate public policy outcomes.

Finally, for future research, with respect to e-participation, not only do specific cases of ICT and participation need to be investigated, but the normative foundations need to be further elaborated upon. The two-way electronic communication serves as a tool that can genuinely be used for deliberative democracy. Thus, in enriching the democratic process, it does not only refers to the use of technological innovations, but it also needs to consider the community. It has been argued that meaningful participation is even more important in our electronic age to avoid loss of credibility and democratic legitimacy (Coleman and Gøtze, 200l). Noveck (l999) described that transparent electronic public spheres allow us to maximise the potential of the digital age and minimise the dangers. She argued that we need to create "deliberative spaces on the Net that are independent, non-profit, non-partisan and not commercial". Not only the research into e-participation is still in its infancy, but as a society, we are still in the process of undergoing the paradigm shift associated with digital or online technologies. A new discourse is being established – this will affect not only public participation in public policy formulation, but expectations of democracy as well.

This thesis was identified to be among the formative studies examining the public participation discourse in Malaysia's public policy formulation. The findings, conclusions and recommendations of the study therefore present further research possibilities. The researcher found that participation theory and literature relevant to the e-participation in developing country were lacking compared to developed

countries. For example, Malaysian literature tended to focus mainly on opinion and vote on some issues. On the other hand, international literature and participation theory was extensive for Asian (Korea and Singapore), European and American contexts. There exists enormous space for expanding participation theory and literature within the Asian and Malaysian contexts. Further, the study suggests that there are several possibilities for research on the topic of citizens' participation within Malaysia. For example, since citizens' participation is envisaged in all municipalities, namely, rural, urban and large district councils, a number of primary, comparative or ethnographic studies may be undertaken around a range of variables. Finally, citizens' participation has been acclaimed as the solution for all development problems in every part of the world. It is even thought of as bringing the democratic project to an end.

E-participation is more than a vision; it is about acknowledging the citizens' right and obligation to enact democratic participation, on their own terms, in their own fashion, whenever they choose to be active. The arrangements for this multiplicity must be malleable. New roles of participation and e-participation are not implemented, they occur in the overlap of the old and the new cultural structures. However, it must be recognized that the citizen participation through e-participation concept has its own limitations that require the ongoing thinking and study in this research field.

7.5 Conclusion

This study found that a clear e-participation framework existed in the public policy formulation process. The expert agreed with the proposed e-participation framework for public policy formulation. The major barriers perceived by the suggested

framework were anxiety on the secrecy, accessibility, transparency, accessibility and trust around the public policy formulation process.

This study helps to understand the current issue of public participation in public policy formulation process at government agencies in Malaysia from the perspectives of university students. Furthermore, the research provides information about e-participation for people who seek to use e-participation platform in ways that will motivate other people effectively to improve public policy formulation performance. Finally, it can imply the government agencies to implement one-participation framework successfully at their agencies in Malaysia.

In this research, public participation has been developed by identifying the four basic criteria as the drivers to e-participation framework.

1. Community: They are citizens in their capacity as lay people rather than members of interest groups, business or the Government. The concerns shown by the citizens are due to their capacity as the members of the public. They are not influenced by the media or money and administrative power.

2. Communication: Although initially defined as requiring face-to-face interaction, in the light of the potential of e-participation, the definition has been broadened to include other forms of communication. Participants i.e. the public and the decision makers have to be reactive and proactive. They must critically examine their values, assumptions, and interest. Two-way communication also requires sincerity: each participant makes a sincere effort to make all relevant information known.

3. Influence on decision: The communities have some bearing on the outcome, that participation is not merely tokenistic. It does not require consensus to be reached, but seeks a solution that is agreed upon and is workable. The public must be able to challenge and defend claims, that is, every participant must be equally entitled to introduce and question an assertion under consideration.

4. Better public policies: The results of the participation should be integrated into public policies and should have a measurable influence on the outcome. Experiences collected, recommendations made, and insights gained should be incorporated into the decision or analysis. Public policy effectiveness is impacted.

For participation to be direct and meaningful, the interested and affected parties must first be identified. Meaningful participation needs to actively seek out the uninformed, uninterested, and disenfranchised people among the public, and acknowledge their views (or lack thereof) in the decision making process. The process of identification must allow for self-identification as well. Bottom-up participation, in which citizens and local communities take the initiative to affect change, must also be incorporated. There must also be flexibility to allow unplanned participation to shape the process.

In the next step, people must be informed and educated. While direct and meaningful participation requires an informed citizenry, access to information alone is not sufficient to ensure that a higher level of participation is achieved. Information exchange has to occur in different directions. Not only must the citizens be initiated into the language of experts and policy makers, but those traditionally in decision making positions also need to learn the language of lay persons. Next, all those

affected must be able to interact, that is to communicate, discuss, and deliberate. Finally, the outcome of the participation should have an effect on the policies themselves.

REFERENCES

Addison, T. (2003). E-commerce project development risks: evidence from a Delphi survey, *International Journal of Information Management*, 23(1), 25-40.

Ahmed, N. (2006). An Anthology of E-Participation Models E-Participation and EGovernment: Understanding the Present and Creating the Future. Chapter V, In *Report of the Ad Hoc Expert Group Meeting at Budapest, Hungary*, United Nations: New York.

Ainsworth, S., Hardy, C., & Harley, B. (2005). Online consultation: E-democracy and E-resistance in the case of the development gateway. *Management Communication Quarterly,* 19(1), 120−145.

Aizi, M.S. & Shahizan, H. (2011). An Actor Network Theory (ANT) approach to Malaysian e-participation framework. *20ll International Conference on Social Science and Humanity*. IPEDR 5(20ll) IACSIT Press, Singapore.

Al-Kodmany, K. (2000). Public participation: Technology and democracy. *Journal of Architectural Education,* 53 (4), 220−228.

Alasf, S. (1998). *Scientific Research: Concept, Tools and Method*. Jordan: Dar Al Feker.

Alashari, A. (2007). *A Brief in Scientific Research Method*. Jeddah: Al-Khawarizmi Center.

Albrecht, S. (2006). Whose voice is heard in online deliberation? A study of participation and representation in political debates on the Internet. *Information, Communication and Society,* 9(1), 62−82.

Aldridge, J. & Fraser, B.(2000). A cross-cultural study of classroom learning environment in Australia and Taiwan, Learning Environment Research, 3(2), 101 -134.

Andersen, K.V. & Henriksen, H. Z. (2006). E-government maturity models: Extension of the Layne and Lee model, *Government Information Quarterly*, 23(2), 236-248.

Andrews, A. (2005). South Africa: Case Study on Citizen Participation in Setting and Monitoring Environmental Standards. (Capricorn Park/A Science Park In Cape T Own) *Proceeding of the 5ᵗʰ International Conference on Environmental Compliance and Enforcement*, l55-l62.

Arnstein, S.R. (1969). A ladder of Citizen Participation. *Journal of the American Planning Association*, 35(4), 2l6-224.

Atkinson, C. J. (2002). The Multidimensional Systemic Representation of Actor Networks: Modelling Breast Cancer Treatment Decision-Making. *Proceedings of the 35th Hawaii International Conference on System Sciences*.

Avdic, A., Hedström, K., Rose, J. & Grönlund, Å. (2010). Understanding eParticipation. *Contemporary PhD eParticipation Studies in Europe*, Örebro University library.

Aykac, S. S. (2009). *An Actor-Network Theory (ANT) approach to Turkish E-Government gateway initiative*. 1st International Conference on eGovernment & eGovernance (ICEGEG 2009), Ankara, Turkey.

Badescu, G., Sum, P. & Uslaner, E.M. (2004). Civil Society Development and Democratic Values in Romania and Moldova. *East European Politics & Societies*, 18(2), 316-341.

Barber, B. (1984). *Strong Democracy: Participatory Politics for a New Age.* Berkeley: University of California Press.

Barr, S. (2001). *President Searching for a Few Good E-Government Ideas*. Washington Post, 10 August 2001

Bazeley, P. (2004). Issues in Mixing Qualitative and Quntitative Approaches to Research, in Buber, Renate, Johannes Gadner & Lyn Richards (eds), *Applying Qualitative Method to Marketing Management Research*, Houndsmill: Palgrave Macmillan, 141-156.

Beckers, D. (1998). Research on virtual communities: an empirical approach. *PDC '98 / CSCW '98 Workshop on Designing Across Borders: The Community Design of Community Networks*.

Beech, B. (1999). Go the extra mile - use the Delphi Technique, *Journal of Nursing Management*, 7, 281-288.

Bekkers, V. (2004). Virtual policy communities and responsive governance: Redesigning on-line debates. *Information Polity*, 9(3/4), 193−203.

Bell, J. (1993). *Doing your Research Project*. Buckingham, England: Open University Press.

Berman, J. & Witzner, D. J. (1997). Technology and democracy. *Social Research*, 64(3), 1313−1319.

Betancourt, V. (2005). *E-government: An opportunity for citizen participation in the era of digital development.* Retrieved from: http://www.apc.org/en/news/all/world/e-government-opportunity-citizen-participation-era

Bimber, B. (2001). Information and political engagement in America: The search for effects of information technology at the individual level. *Political Research Quarterly*, 54(1), 53−67.

Bingham, L. B., Nabatchi, T. & O'leary, R. (2005). The new governance: Practices and processes for stakeholder and citizen participation in the work of government. *Public Administration Review*, 65(5), 547−558.

Birkland, T.A. (2005). *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making.* New York: M.E Sharpe.

Bradburn, N. (1983). Response effects. In Rossi, P., Wright, J. & Anderson, A. (Eds.), *Handbook of survey research.* 289-328, New York: Academic Press.

Bradley, L. & Stewart, K.(2003). A Delphi study of Internet banking, *Marketing Intelligence & Planning*, 21(5), 272 – 281.

Brodie, E., Cowling, E. & Nissen, N. (2009). *Understanding Participation: A literature Review* National Council for Voluntary Organisations. Retrieved September, l5, 2013 from: http://www.ivr.org.uk/images/stories/Institute-of-Volunteering-Research/Migrated-Resources/Documents/U/Pathways-literature-review-final-version.pdf

Brody, S.D., Godschalk, D.R. & Burby, R.J. (2003). Mandating Citizen Participation in Plan Making: Six strategic planning choices. *Journal of the American Planning Association, 69(3),* 245-264.

Burn, J. & Robins, G. (2003). Moving towards eGovernment: a case study. *logistics Information Management*, l6 (l), 25-35.

Callon, M. (1986). Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay. Retrieved September l3, 2009 from http://www.vub.ac.be/SOCO/tesa/RENCOM/Callon%20(l986)%20 Some%20element s%20of%20a %20sociology%20of%20translation.pdf

Callon, M. (2002). "Writing and (Re)writing Devices as Tools for Managing Complexity" , in J. law and Mol, A. (Eds) *Complexities: Social Studies of Knowledge-Practices*. London: Duke University Press.

Cantrill, J.A., Sibbald, B., Buetow, S. (1996). The Delphi and nominal group techniques in health services research. *International Journal of Pharmacy Practice*, 4,67−74.

Carlitz, R. D. & Gunn, R. W. (2002). Online rulemaking: A step toward E-governance. *Government Information Quarterly*, 19(4), 389−405.

Cawood, J. & Simpson, S. (2000). *Can Public Policy Widen Participation in Cyberspace? Networks, Interests and Initiatives in North West England*. Paper presented at Directions in Advanced Computing Conference, Seattle, WA.

Chadwick, A. (2003). Bringing E-democracy back in - Why it matters for future research on e-governance. *Social Science Computer Review*, 21(4), 443−455.

Chadwick, A. & May, C. (2003). Interaction between states and citizens in the age of the Internet: "E-government" in the United States, Britain, and the European Union. *Governance - An International Journal Of Policy And Administration*, 16(2), 271−300.

Chang, W.Y. (2005). Online civic participation, and political empowerment: Online media and public opinion formation in Korea. *Media, Culture and Society*, 27(6), 925−935.

Charalabidis, Y., Koussouris, S. & Kipenis, L. (2009), *Report on the Objectives, Structure and Status of eParticipation Initiative Projects in the European Union*

Ciborra, C.U. (2000). *A Critical Review of the literature on the Management of Corporate Information Infrastructures*, in C. Ciborra (ed.) From Control to Drift: The Dynamics of Corporate Information Infrastructures. Oxford: Oxford University Press.

Clift, S. (2000). An Internet of Democracy. *Communications of the ACM*, 43(11), 31−32.

Cohen, F. & Manion, Y. (1995). *Community organization*. Boston: Houghton Mifflin.

Coleman, S. & Götze, J. (2001). *Bowling Together: Online Public Engagement in Policy Deliberation*. UK: Hansard Society.

Commission of the European Communities. (2003). *Communication from the Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions: The Role of Egovernment For Europe's Future.* Retrieved from: http://Ec.Europa.Eu/Information_Society/Eeurope/2005/Doc/All_About/Egov _Communication_En.Pdf

Cressman, D. (2009). *A brief overview of Actor-Network Theory: Punctualization, Hetergeneous Engineering & Translation*, ACT Lab/Center for Policy Research on Science & Technology, School of Communication, Simon Fraser University.

Creswell, J.W. (1994). *Research Design - Qualitative and Quantitative Approaches*. USA: Sage Publication.

Custer, R. L., Scarcella, J. A., & Stewart, B. R. (1999). The modified Delphi technique: A rotational modification. *Journal of Vocational and Technical Education*, 15 (2), 1-10.

Czinkota, M.R. & Ronkainen, I.A. (1997). International business and trade in the next decade: report from a Delphi study, *Journal of International Business*, 28(4), 827-844. Retrieved from http://www.jstor.org/pss/155496

Dahl, R A, (1999). *Democracy and its critics*, Stockholm: Ordfront.

Dahl, R.A. (1971). *Polyarchy: Participation and opposition*. New Haven: Yale University Press.

Daneke, G. A. & Steiss, A.W. (1978). *Planning and Policy Analysis for Public Administrators*, in John W. Sutherland (ed.), Management Handbook for Public Administrators, New York: Van Nostrand and Reinhold Company.

Davenport, T. (1997). Ten Principles of Knowledge Management and Four Case Studies. *Knowledge and Process Management, 4(3),* l87-208.

Day, D. (1997). Citizen participation in the planning process: an essentially contested concept? *Journal of Planning literature,* 11(3), 421-434.

Delbecq, A. L., Van de Ven, A. H. & Gustafson, D. H. (1975). *Group Techniques for Program Planning*. Glenview, Scott, Foresman.

Deloitte & Touche (2003). *At the Dawn of e-Government: The Citizen as Customer*. Retrieved April, 24, 20l3from: http://www.publicnet.co.uk/publicnet/fe000620.htm

Desanctis, G. & Poole, M. S. (1994). Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory. *Organization Science. 5*, 121-147.

Detlor, B., & Finn, K. (2002). *Towards a framework for government portal design: The government, citizen, and portal perspectives*. In A. Gronlund (Ed.), Electronic government: Design, applications, and management. Hershey, Pennsylvania: Idea Group, 99-119.

Dewey, J. (1916). *Democracy and Education.* The Macmillan Company.

Dodd, J.D. & Boyd, M.H. (2000). Capacity Building – linking Community Experience to Public Policy. *Population and Public Health Branch*, Atlantic Regional Office, Health Canada.

Dutta-Bergman, M. J. (2005). Access to the Internet in the context of community participation and community satisfaction. *New Media and Society*, 7(1), 89−109.

Dutton, W.H. (2007). *E-Democracy: Reconfiguring Participation in Governance and Public Policy Digest of Electronic Government policy and regulation*. Retrieve 4 January 2009, from http://app.guro.go.kr/eforum/script/%Bl%E2%Cl%B6%BF%AC%BC%B3%B9%AE(%BF%B5%B9%AE).pdf

Dye, T.R. (2008). *Understanding Public Policy.* USA: Pearson.

Eckman, C. A. (1983). Development of an instrument to evaluate intercollegiate athletic coaches: A modified Delphi study. *Unpublished doctoral dissertation*, West Virginia University, Morgantown.

Ellingsen, G., Munkvold, & Glenn. (2007). Common Information Spaces along the illness trajectories of chronic patients. *Proceedings of the Tenth European Conference on Computer-Supported Cooperative Work*, 291-310.

Elwood, S. A. (2001). GIS and collaborative urban governance: Understanding their implications for community action and power. *Urban Geography*, 22(8), 737−759.

Elyas Omar (1974). *Policy analysis and development in Malaysia*. Malaysia: National Institute of Public Administration.

Encyclopædia Britannica. (2009). *A Theory of Justice*. Retrieved 17 June 2009, from Encyclopedia Britannica Online:http://www.britannica.com/EBchecked/topic/591085/A-Theory-of-Justice

EPU. (2004). Development Planning in Malaysia, Retrieved May, 5, 2009 from: http://www.epu.gov.my/c/document_library/get_file?uuid=87293fd8-ba57-4fe0-a65a-52f8f925c397&groupId=283545

Esposito, J. L. (2002). Interactive, multiple-method questionnaire evaluation research: A case study. *International Conference in Questionnaire Development, Evaluation, and Testing (QDET) Methods*. Retrieve from: http://www.jpsm.umd.edu/qdet/final_pdf_papers/Esposito.pdf

Faucher, J.B.P.L., Everett, A.M., & Lawson, R. (2008). Applying a modified Delphi approach to determine the current state of the concept of knowledge. *Proceedings of the 39th Annual Meeting of the Decision Sciences Institute*, Baltimore, Forthcoming.

Fernández-Maldonado, A. M. (2005). Virtual cities as a tool for democratization in developing countries. *Knowledge, Technology and Policy*, l8(l), 43−6l.

Fishkin, J.S. (1995). *The Voice of the People: Public Opinion and Democracy*. Yale: University Press.

Friedrich, C.J. (1963). *Man and His Government*. New York: McGraw-Hill.

Frewer, L., Rowe, G., Marsh, R. & Reynolds, C. (2001). Public Participation Methods: Evolving and Operationalising An Evaluation Framework. *Developing and testing a toolkit for evaluating the success of public participation exercises*. Retrieve from: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4076192.pdf

Fulla, S. & Welch, E. (2002). Framing virtual interactivity between government and citizens: A study of feedback systems in the Chicago Police Department. *Proceedings of the 35th Annual Hawaii International Conference on System Sciences*. Computer Society Press.

Gerston, L.N. (2004). *Public Policy Making: Process and Principles.* New York: M.E Sharpe.

Gimmler, A. (200l). Deliberative democracy, the public sphere and the Internet. *Philosophy and Social Criticism*, 27(4), 21−39.

Godschalk, D. R., Brody, S. & Burby, R. (2003). Public Participation in Natural Hazard Mitigation Policy Formulation: Challenges for Comprehensive Planning. *Journal of Environmental Planning and Management*, 46(5), 733-754.

Gordon, T. & Pease, A. (2006). RT Delphi: an efficient 'Round-less' almost real time Delphi method, *Technology Forecasting and Social Change*, 73(4), 321-333. Retrieved from http://www.sciencedirect.com/science/article/pii/S0040162505001435

Goss, S. (1999). *Managing working with the public*. Kogan Page. london. Available at: www.oblongdesigncollective.org.uk/recwb/wb/media/goodpractisecommcohesion.pdf

Gronlund, A. & Horan, T. (2004). Introducing e-gov: history, definitions, and issues. *Communications of the AIS, 15,* 713-729.

Groves, R. M., (1987). Research on survey data quality. *Public Opinion Quarterly,* 51, 156-172.

Glaser, B. G. (1995). A look at Grounded Theory: 1984 to 1994. In Glaser, B.G. (Ed.), *In Grounded Theory 1984-1994* (pp. 3-17). Mill Valley: Sociology Press.

Glaser, B.G. & Strauss, A.L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine de Gruyter.

Glaser, B.G. (1998). *Doing Grounded Theory: Issues and Discussions*. Mill Valley: Sociology Press.

Grant, J. (1994). *The drama of democracy: Contention and dispute in community planning*. Toronto: University of Toronto Press.

Gordon, T. & Pease, A. (2006). RT Delphi: an efficient 'Roundless' almost real time Delphi method, *Technology Forecasting and Social Change*, 73(4), 321-333.

Goss, S. (1999). *Managing working with the public*. London: Kogan Page.

Grobbelaar, S.S. (2007). *R&D in the National system of innovation: A system dynamic model.* (Doctoral dissertation, Pretoria University). Retrieved from: http://upetd.up.ac.za/thesis/available/etd-07212007-130132/unrestricted/00front.pdf

Grönlund, Ä. (2002). Introduction to the special issue on E-democracy in practice. *e-Service Journal*, 2(1), 3.

Gross, T. (2000). Technological support for e-democracy: History and perspectives. *Proceedings 11th International Workshop on Database and Expert Systems Applications*, Greenwich, UK.

Gupta, M., Prabhat, K. & Jaijit, B. (2004). *Government Online Opportunities & Challenges*. New Delhi: Tata Mcgraw Hill.

Gupta, U.G. & Clarke, R.E. (1996). Theory and Applications of the Delphi Technique: A bibliography (1975-1994), *Technological Forecasting and Social Change*, 53, 185-211.

Habermas, J. (1970). *On Systematically Distorted Communication, Towards On Theory of Communication*. Inquiry 13: 205-18. Critical sociology, editor: Paul Conerton, translated by Kamal Pooladi, Tehran, Markaz pub. Fourth print.

Hacker, K. L. & van Dijk, J. (2000). *Digital Democracy: Issues of Theory and Practices*. London: Sage.

Hacker, K. L. (2004). The potential of computer-mediated communication (CMC) for political structuration. *Javnost-The Public*, 11(1), 5−25.

Hagemann, C. (2002). Participation in and contents of two Dutch political party discussion lists on the Internet. *Javnost-The Public*, 9(2), 61−76.

Halcomb, E.J. & Andrew, S. (2005). Triangulation as a method for contemporary nursing research. *Nurse Researcher*, 13(2), 71-82.

Hanseth, O. (2004). Actor network theory and information systems: What's so special. *Information Technology & People*, 17(2), 116-123.

Hanseth, O. & Braa, K. (1998). Technology as a Traitor: Emergent SAP Infrastructure in a Global Organisation. *Proceedings of the Nineteenth International Conference on Information Systems*, ICIS'98, Helsinki.

Haruta, C, & Radu, B. (2010). Citizen Participation In The Decision Making Process At local And County levels In The Romanian Public Institutions, *Transylvanian Review of Administrative Sciences,* 31, 76-92.

Hasson, F., Keeney, S., & McKenna, H. (2000). Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing*, 32 (4), 1008-1015.

Held, D. (1996). *Models of Democracy.* Cambridge: Blackwell Publishers.

Hill, K. Q., & Fowles, J. (1975). The methodological worth of the Delphi forecasting technique. *Technological Forecasting and Social Change*, 7, 179-192.

Holzer, M. & Seang-Tae Kim, (2008). Digital Governance in Municipalities Worldwide, *National Center for Public Performance*. Retrieved from http://unpanl.un.org/intradoc/groups/public/documents/aspa/unpan0l2905.pdf

Horowitz, D.L. (1989). Is there a third World Policy process? *Policy Sciences,* 22, 197-212.

Horrigan, J.B. (2005).On Demand Citizens: EGovernment at High Speed. *Pew Internet & American life Project*, Washington, USA.

Howard, P. N. (2005). Deep democracy, thin citizenship: The impact of digital media in political campaign strategy. *Annuals of the American Academy of Political and Social Science*, 597, 153−170.

Howell, D.C. (1995). *Fundamental statistics for the behavioral sciences*. 3rd edition. CA: International Thomson publishing.

Hsu, C.C & Sandford, B.A. (2007). The Delphi Technique: Making Sense of Consensus. *Practical Assessment, Research & Evaluation,* 12(10), 1-8. Retrieved from http://pareonline.net/pdf/v12nl0.pdf

Hudson,W. E. (l998). *American in Peril: Seven challenges to America's future*. New Jersey: Chatham House publisher.

Hudson-Smith, A., Evans, S. & Batty, M. (2005). Building the virtual city: Public participation through edemocracy. *Knowledge, Technology and Policy*, 18(1), 62−85.

Hughes, L. (2006). *Four key elements of e-government*. Retrieve 15 November 2008 from http://www.b-eye-network.com/view/2638

Hummel, R. (1994). The Bureaucratic Experience: A Critique of life in the Modern Organization, in Alkadry, M.G., (2003). Deliberative Discourse between Citizens and Administrators: If Citizens Talk, will the Administrators listen? *Administration & Society*, 35(2), 184-209.

Ibrahim, A. (2009). *Creating Collaborative Platform Based On Ant*. Unpublished Master's thesis, Universiti Utara Malaysia.

Ibrahim, H. (2006). *An Approach to the Development of Information Technology Transfer Methodology Based on Actor-Network Theory*. Unpublished Doctoral dissertation, Universiti Utara Malaysia.

Information Society Commission. (2003). *E-Government – More Than an Automation of Government Services.* Retrieved from:
http://www.isc.ie/downloads/egovernment.pdf

International Association for Public Participation. (2007). *IAP2's Code of Ethics for Public Participation Practitioners*. Retrieved l0 March 2009, from http://iap2.affiniscape.com/ displaycommon.cfm?an=l&subarticlenbr=8

Irvin, R.A. & Stansbury, J. (2004). Citizen Participation in Decision-Making: Is It Worth the effort?, *Public Administration Review*, (64)(1), 55-65.

Islam, M.S. (2008). Towards a sustainable e-Participation implementation model. *European Journal of ePractice, 5,*1-12.

Ivankova N. V., Creswell J. W. & Stick, S. L. (2006). Using mixed methods sequential explanatory design: From theory to practice. *Field Methods*, 18(3), 3-20.

Jacobs, J. M. (1996). Essential assessment criteria for physical education teacher education programs: A Delphi study. *Unpublished doctoral dissertation*, West Virginia University, Morgantown.

Jacobs, R. (1996). *local politics*. Vermont: Gower.

Jairath N. & Weinstein J. (1994). The Delphi methodology: a useful administrative approach. *Canadian Journal of Nursing Administration*, 7, 29–42.

Jensen, J.L. (2003a). Public spheres on the Internet: Anarchic or government-sponsored − A comparison. *Scandinavian Political Studies*, 26(4), 349−374.

Jensen, J.L. (2003b). Virtual democratic dialogue? Bringing together citizens and politicians. *Information Polity: The International Journal of Government and Democracy in the Information Age*, 8(l/2), 29−47.

Johnson, R.B. & Onwuegbuzie, A.J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.

Johnson, T. J. & Kaye, B. K. (2004). Wag the blog: How reliance on traditional media and the Internet influence credibility perceptions of Weblogs among blog users. *Journalism and Mass Communication Quarterly*, 8l(3), 622−642.

Jones, M. R. (1998). Information systems and the double mangle: Steering a course between the Scylla of embedded structure and the Charybdis od strong symmetry. Larsen, T., Levine, L. & DeGross, J. (Eds), Information systems: Current issues and future changes. Proceedings of the IFIP WG8.2/8.6 Joint Working Conference. Helsinki, Findland. 287-302.

Kangas, J. & Store, R. (2003). Internet and teledemocracy in participatory planning of natural resources management. *landscape and Urban Planning*, 62(2), 89−101.

Kanstrup, A.M., Rose, J. & Torpe, L. (2006). A multi-perspective approach to eparticipation. Demo-Net – The Participation Network: European Research Workshop: in conjunction with the *7th Mediterranean Conference on Information Systems*, 3-6.

Karsten, H. (2000). *Weaving tapestry: collaborative information technology and organizational change*. Jyvaskyla, Findland: Jyvaskyla University Printing House.

Kearns, I., Bend, J. & Stern, B. (2002). *E-participation in local government*. London: IPPR.

Keller, G. & Warrack, B. (2003). *Statistics for management and Economics*. 6th Edition. CA: Pacific Grove, Brooks/Cole.

Khanna, P. (2005). Activists take politics to a new frontier. *Computing Canada*, 31(13), 20.

Koch, A. (2005). Cyber citizen or cyborg citizen: Baudrillard, political agency, and the commons in virtual politics. *Journal of Mass Media Ethics*, 20(2/3), 159−175.

Komito, L. (2005). e-Participation and Governance: Widening the net. *The Electronic Journal of eGovernment*, 3(1), 39-48.

Koulolias, V. (2007). *Interview with Vasilis Koulolias, Executive Director of Gov2U*. Retrieve from: http://www.egovblog.com/2007/03/2l/interview-with-vasilis-koulolias-executive-director-of-gov2u/

Kweit, M.G. & Kweit, R.W. (2007). Participation, Perception of Participation, and Citizen Support. *American Politics Research,* 35(3), 407-425.

Landeta, J. (2006). Current validity of the Delphi method in social sciences. *Technological Forecasting and Social Change*, 73, 467-482.

Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review, 24(4),* 691-710.

Langton, S. (1978). *Citizen Participation in America*. Massachusetts: Lexintong Books.

Latour, B. (1993). *We have never been Modern*. Cambridge, MA: Harvard University Press.

Latour, B. (1999a). *On Recalling ANT*. in J. Law and J. Hassard (Eds) *Actor-Network Theory and After, Sociological Review Monographs*. london: Wiley-Blackwell.

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.

Law, J. (2004). *After Method: Mess in Social Science Research*, Routledge, London.

Leatherman, J. & Howell, M. (2000). *Meaningful Input to Public Policy: Citizen Participation Strategies.* Retrieved from: http://www.oznet.ksu.edu/library/agec2/ mf2493.pdf

Lebec, M. & Luft, J. (2007). A mixed method analysis of learning in online teacher professional development: A case report. *Contemporary Issues in Technology and Teacher Education.* 7(1), 554-574.

Leedy, P. D. & Ormrod, J. E. (2005). *Practical research: Planning and design.* New Jersey: Prentice Hall.

Leong, H. K. (2000). Citizen participation and policy making in Singapore**.** *Asian Survey*, 40(3), 436- 455.

Leong, H. K. (1992). Dynamics of Policy-Making in Malaysia: The Formulation of the New Economic Policy and the National Development Policy. *Asian Journal of Public Administration*, 14(2), 204-227.

Lester J.P., Steward, J.J. & Hedge, D.M. (2000). *Public Policy An Evolutionary Approach.* Unites States: Edition Thomson.

Linstone, H.A., & Turoff, M. (1975). *The Delphi method: Techniques and applications.* Reading: Addison-Wesley.

Linstone H.A.(1978). *The Delphi technique.* Handbook of Futures Research.Westport, CT: Greenwood.

Ljungberg, J., Bergquist, M., Ihlström, C. & Åkesson, M. (2008). *Combining Actor Network Theory and Genre Theory to Understand the Evolution of Digital Genres. Proceedings of JAIS Theory Development Workshop*, 8-20.

Lourenco, R. P. and Costa, J. P. (2006). Discursive e-Democracy support. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences*. Computer Society Press.

Lowndes, V., Pratchett, L. & Stoker, G. (2001) Trends in public participation: part 2 – Citizens' perspectives. *Public Administration*, 79(1), 205-222.

Ludwig, B. G. (1994). Internationalizing Extension: An exploration of the characteristics evident in a state university Extension system that achieves internationalization. *Unpublished doctoral dissertation*, The Ohio State University, Columbus.

Luhrs, R., Albrecht, S., Lubcke, M. & Hohberg, B. (2003). How to grow? Online consultation about growth in the City of Hamburg: Methods, techniques, success factors. In R. Traunmüller (Ed.), EGOV 2003 (Vol. 1NCS 2739, pp. 79–84). Berlin: Springer-Verlag.

Macintosh, A. & Whyte, A. (2006). eParticipation in policy-making: the research and the challenges. In Cunningham, P. & Cunningham, M. (Eds.), *Exploiting the Knowledge Economy: Issues, Applications, Case Studies*. Amsterdam: IOS Press.

Macintosh, A., Malina, A. & Whyte, A. (2002). Designing e-democracy for Scotland. *Communications: The European Journal of Communications*, 261-278.

Macintosh, A. (2004). Characterising E-participation in Policy-Making. *Proceedings of the 37th Hawaii International Conference on System Sciences*, 1-10.

Macintosh, A. (2002). *Using information and communication technologies to enhance citizen engagement in the policy process*. Prepared for the OECD PUMA Group. International teledemecracy Centre: Napier University.

Macintosh, A. (2003). *The need for semantic technologies to Support Policy-Making.* Retrieved from: http://www.imu.iccs.gr/events/kmworkshop/ index_files/01-Ann%20Macintosh.doc

MacKenzie, Donald & Wajcman, J. (1999) *The social shaping of technology*. 2nd ed. Buckingham: Open University Press.

MAMPU. (1997a). *Electronic Government Flagship Application: Blueprint for Electronic Government Implementation*. Kuala lumpur: Malaysian Administrative Modernisation and Management Planning Unit.

MAMPU, (1997b). *Electronic Government Flagship Application: Electronic Government Information Technology Policy and Standards.* Kuala lumpur: Malaysia Administrative Modernisation and management Planning Unit.

Markoff, J. (2000). A Newer, lonelier crowd Emergers in Internet Study. *New York Times*. Retrieved from http://www.nytimes.com

Martin, P.P. (2004). *Virtual environments for citizen participation: principal bases for design*. Retrieve from: http://www.e-zarticipa.org/en/files/e_Participa. VirtualEnvironmentsFor CitizenParticipation.doc

McMaster, Vidgen & Wastell (1998). Networks of Association and Due Process in IS Development. *Proc. of the IFIP Conference on Information Systems: Current Issues and Future Changes*, Helsinki.

McMillan, J. H. & Schumacher, S. (2010). Research in education: Evidence based inquiry, UK: Allyn and Bacon Inc.

Merriam, S.B. (1998). *Qualitative research and case study applications in education: revised and expanded from Case Study Research in Education*. Hoboken: John Wiley.

Miller, I, & Freund, J. E. (1985). *Probability and statistics for engineers*. 3rd edition. New Jersey: Prentice-hall.

Modell, S. (2005). Triangulation between case study and survey methods in management accounting research: An assessment of validity implications. *Management Accounting Research*, 16, 231-254.

Mohsin Ahmad & Raha Othman. (2007). Implementation of electronic government in Malaysia: The status and potential for better service to the public, *Public Sector ICT Management Review*, 1(1), 2-10.

Mitchell, V. M. (1991). The Delphi technique: an exposition and application, *Technology Analysis and Strategic Management*, 3(4), 333.

Mitev, N. (2000). Toward social constructivist understandings of IS success and failure: introducing a new computerized reservation system. *International Conference on Information Systems*, Brisbane, Queensland, Australia.

Monteiro, E. (2000). *Actor-Network Theory and Information Infrastructure: From Control to Drift*, Oxford: Oxford University Press.

Monteiro, E., & Hanseth, O. (1995). Social shaping of information infrastructure: on being specific about the technology. In W. J. Orlikowski, J. Walsham, M. R. Jones & J. I. De Gross (Eds.), *Information Technology and Changes in Organizational Work*, 325-34, London: Chapman & Hall.

Moreno-Jimenez, J. M. & Polasek,W. (2003). E-democracy and knowledge. A multicriteria framework for the new democratic era. *Institute for Advanced Studies, Economics Series, Vienna: Department of Economics and Finance Economics Series*: l42.

Mouffe, C. (1993). *Return of the Political*. London: Verso.

Mouton, J. & Marais, H. C. (2001). *Basic Concepts in the Methodology of the Social Science*. Pretoria: Human Sciences Research Council.

Muhammad, A. O. & Mokhtar, M. Y. (2006). Pelaksanaan Projek Kerajaan Elektronik (Electronic Government - EG) - Satu Penilaian. *Public Sector ICT Management Review,* 1(1), 51-59.

Muhammad Mustafa Kamal, (2009). An analysis of e-Participation research: moving from theoretical to pragmatic viewpoint, *Transforming Government: People, Process and Policy*, 3(4), 340 – 354.

Muhammad Rais, A.K. & Salmah, K. (l999). E-Government: Reinventing Service Delivery. In Muhammad Rais, A.K. (Ed.), *Reengineering the Public Service: leadership and Change in Electronic Age* (pp. 183 – 204). Malaysia: Pelanduk.

Murphy M.K., Black N., Lamping D.L., McKee C.M., Sanderson C.F.B., & Askham J. (1998). Consensus development methods and their use in clinical guideline development. *Health Technology Assessment*, 2(3).

Murray, W. F., & Jarman, B. O. (1987). Predicting future trends in adult fitness using the Delphi approach. *Research Quarterly for Exercise and Sport*, 58 (2), 124-131.

Myers, B., Kappelman, l. & Prybutok, V. (1997). A comprehensive model for assessing the quality and productivity of the information systems function. *Information Resources management Journal*, 4-33.

Myers, M.D. (1994). A disaster for everyone to see: An interpretive analysis of a failed IS project. *Accounting, Management and Information Technology*, 4(4), 185-201.

Nachmias, D. & Rotem, A. (2005). *E-Participation in Israeli local Governments: A Comparative Analysis.* Retrieve from: http://www.rotembd.co.il/publications/E-participation%20in%20Israeli%20 local %20Governments.pdf

Nagel, J. (1987). *Participation*. Englewood Clifs, New Jersey: Prentice Hall.

Navarra, D.D. & Cornford, T. (2012). The State and Democracy After New Public Management: Exploring Alternative Models of E-governance, *The Information Society Journal*, 28(1), 37-45.

Nelms, K. R. & A. L. Porter (1985). EFTE: An Interactive Delphi Method, *Technological Forecasting & Social Change*, 28, 43-61.

Neuman, W. L. (2007). *Basics of social research: qualitative and quantitative approaches*. Boston: Pearson.

Nevo, D. & Chan Y. E. (2007). A Delphi study of knowledge management systems: Scope and requirements, *Information & Management*, 44(6), 583–597.

Norland-Tilburg, E. V. (l990). Controlling error in evaluation instruments. *Journal of Extension*, [On-line], 28(2). Available at *http://www.joe.org/joe/l990summer/ tt2.html*

Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge: Cambridge University Press.

Nwana, E. (1988). *Planning in local government*. Chicago: Milton.

OECD. (2001). *Citizen as partners – information, consultation and public participation in policy making*. Retrieved from: http://213.253.134.43/oecd/pdfs/browseit/420ll3lE.PDF

OECD. (2004). *Promise and Problems of E-Democracy: challenges of Online Citizen Engagement*. Retrieved l7 September 2008, from http://wwwl.oecd.org/publications/e-book/42040llE.PDF

OECD. (2003a). *2nd OECD Symposium on E-Government*. Paris: OECD.

OECD. (2003b). *E-government Imperative.* Retrieved 15 August 2008, from
http://213.253.134.43/oecd/pdfs/browseit/4203071E.PDF

Okot-Uma, R. (2002). *Electronic governance: re-inventing good governance*.
Commonwealth Secretariat, london. Retrieved June, 14, 20l3from:
http://wwwl.worldbank.org/ publicsector/egov/Okot-Uma.pdf

Oppenheim, A. N. (1992). *Questionnaire design, interviewing and attitude
measurement*. London: Pinter Publishers.

Osborne, D. & Plastrik, P. (2006). *The Price of Government: Getting the Results we
need in an Age of Permanent Fiscal Crisis*. New York: Perseus Books Group.

Ott, M. C. (1972). Foreign policy formulation in Malaysia. *Asian survey : a bimonthly
review of contemporary Asian affairs, 12*(3).

Panopoulou, E., Tambouris, E. & Tarabanis, K. (2008). *Framework for eParticipation
Good Practice*. Retrieved July, 14, 2013 from: *www.european-
eparticipation.eu*

Pardo, T. (2000). *Realizing the Promise of Digital Government: It's More than
building a Web Site*. Center of Technology in Government, University of
Albany.

Park, H. S. (2002). Case study: Public consensus building on the Internet.
Cyberpsychology and Behavior, 5(3), 233−239.

Pateman, C. (1970). *Participation and Democratic Theory*. London: Cambridge
University Press.

Perlembagaan Persekutuan. Retrieve 13 January 2009, from
http://www.digitalibrary.my/dmdocuments/malaysiakini/338_Perlembagaan_P
ersekutuan.pdf

Petrides, L.A. & Nodine, T.R. (2003).Knowledge management in education: Defining
the landscape. *Institute for the study of knowledge management in education.*

Phang, C.W. & Kankanhalli, A. (2008). A Framework of ICT Exploitation for E-
Participation Initiatives. *Communications of ACM,* 51(12), 128-132.

Phillips, A. (1991). *Engendering Democracy*. UK: Polity Press.

Plato (1995). *The Stateman*. London: Cambridge University Press.

Polat, R. K. (2005). The Internet and political participation - Exploring the
explanatory links. *European Journal of Communication*, 20(4), 435−459.

Powell, B.G. Jr. (1982). *Contemporary Democracies: Participation, Stability and
Violence*. USA: Harvard University Press.

Powell C. (2003). Myths and realities of the Delphi technique. *Journal of Advanced Nursing*, 41, 376–82.

Przeworski, A. & Ferdinando, L. (1997). Democracy and Development. In Axel H. (eds.). *Democracy's victory and crisis*. New York: Cambridge University Press.

Radhakrishna, R. B., Francisco, C. L., & Baggett, C. D. (2003). An analysis of research designs used in agricultural and extension education. *Proceedings of the 30th National Agricultural Education Research Conference, 528-541.*

Ragin, C. C. (1994). *Constructing Social Research*. London: Pine Forge Press.

Rahman, H. (2007). E-Government Readiness: from the Design Table to the Grass Roots. *Proceeding of Conference on Theory and Practice of Electronic Governance*, 225-232.

Rauch, W. (1991). The Decision Delphi. *Technological Forecasting & Social Change,* 15(3), 159-169.

Redburn, F.S. & Buss, T. (2003). *Modernizing Democracy*. National Academy of Public Administration, USA.

Reigeluth, C.M. & Frick, T.W. (1999). *Instructional-design theories and models*. Hillsdale: Lawrence Erlbaum Associates.

Reyes, G.E. (2001). The Policy Making Process and Models for Public Policy Analysis. Retrieved February, 15, 2010 from: http://sincronia.cucsh.udg.mx/poan.htm

Rhodes, J. (2004). South African, Rural ICT Implementation: A Critical Retrospective Application of latour's Due Process Model. *Australasian Journal of Information Systems* 11(2), 46-56.

Rifkin, S.B., Muller, F. & Bichmann, W. (1988). Primary health care: On measuring participation. *Social Science and Medicine,* 26(9), 931–940.

Rifkin, S.B. & Kangere, M. (2002). What is Participation? CBR : a participatory strategy in Africa, Chapter 3, In Hartley, S. (Ed) Centre for International Child Health (CICH), London.

Riley, T.B. (2004). *E-Governance vs. E-Government*. Retrieve at 25 July 2008, from http://www.i4donline.net/issue/nov03/ egovernance_full.htm

Ripley, R.B. & Franklin, G.A. (1982). *Bureaucracy and Policy Implementation*, IL: Dorsey Press.

Rubin, A. & Babbie, E. (1997). *Research methods for social work*. 3rd edition. CA: Pacific Grove, Brooks/Cole.

Sæbø, Ø., Rose, J. & Flak, L.S. (2008). The shape of eParticipation: characterizing an emerging research area, *Government Information Quarterly*, 25, 400-428.

Sæbø, Ø. & Päivärinta, T. (2005). Autopoietic cybergenres for e-Democracy? Genre analysis of a Web-based discussion board. *Proceedings of the 38th Annual Hawaii International Conference on System Sciences*. Computer Society Press.

Scholl, W., König, C., Meyer, B. & Heisig, P. (2004). The future of knowledge management: an international delphi study, *Journal of Knowledge Management*, 8(2), 19 – 35.

Sakowicz, M. (2004). How Should e-Government Be Evaluated? Different Methodologies and Methods. *NISPAcee occasional papers*, 5(2), 18-26.

Sanford, C. & Rose, J. (2008). Characterizing eParticipation. *International Journal of Information Management*, 28(1), 406-421.

Sarker, S., Sarker, S., & Sidorova, A. (2006). Understanding business process change failure: An actor-network perspective. *Journal of Management Information Systems*, 23, 51-86.

Sartori, G. (1987). *The Theory of Democracy*. London: Chatman House publisher.

Schumpeter, J. (1947). *Capitalism, socialism and democracy*. New York: Harper & Brothers.

Sergeant, J. & Steele, J. (1999). *Who asked you? The citizen's perspective on participation*. London: Improvement and Development Agency.

Shulman, S. W., Schlosberg, D., Zavestoski, S. & Courard-Hauri, D. (2003). Electronic rulemaking - A public participation research agenda for the social sciences. *Social Science Computer Review*, 21(2),162−178.

Smith, B.L. (2003). Public Policy and Public Participation Engaging Citizens and Community in the development of Public Policy. Health Canada

Sokolova, M. (2006). *The Place of civil society actors in e-gov programming*. Retrieved from http://www.policy.hu/sokolova/sokolova_research_april.pdf

Soria, C., Thorleifdottir, A. et al. (2007). DEMO-net: D 5.2: eParticipation: *The potential of new and emerging technologies*. Retrieved from: http://www.demo-net.org/what-is-it-about/research-papers-reports-l/deliverables/demo_net-deliverable-5-2-eparticipation-the-potential-of-new-and-emerging-technologies

Špaček, D. (2008). *Citizen-centric government and selected practice of e-participation in the Czech regional public administration*. Retrieve from:

http://www.eur.nl/fileadmin/ASSETS/fsw/Tufan/EGPA2008/Papers/PSGl/Spa
cek.pdf

Squires, G. D. (2002). *Urban Sprawl: Causes, Consequences, and Policy Responses*.
USA: Urban Institute.

Stanforth, C. (2006). *Using Actor-Network Theory to Analyze E-Government
Implementation in Developing Countries*, The Massachusetts Institute of
Technology Information Technologies and International Development, 3 (3)
35–60.

Stern, P.N. (1995). Grounded Theory Methodology: Its Uses and Processes. In Glaser,
B.G. (ed.) *Grounded Theory1l984-1994,* 29-39.

Steyaert, J. (2000). Local governments online and the role of the resident -
Government shop versus electronic community. *Social Science Computer
Review*, 18(1), 3−16.

Strauss, A.L., & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and
Procedures for Developing Grounded Theory*. CA: Sage.

Suh, S.Y. (2005). *Promoting Citizen Participation in e-Government: From the
Korean Experience in e-Participation*, Retrieved from:
http://unpanl.un.org/intradoc/groups/public/documents/un/unpan020076.pdf

Tamarah, A. & Amer, A. (2010). A General Framework for E-Government:
Definition Maturity Challenges, Opportunities, and Success, *European
Journal of Scientific Research* (39)(1), 29-42.

Tambouris, E., liotas, N. & Tarabanis, K. (2007a). A framework for assessing
eParticipation projects and tools. *Proceedings of the 40th Annual Hawaii
International Conference on Hawaii International Conference on System
Sciences*, 1-10.

Tambouris, E., liotas, N., Kaliviotis, D. & Tarabanis, K. (2007b). A framework for
scoping eParticipation. *Proceedings of the 8th Annual International
Conference on Digital Government Research*.

Tatnall, A & Burgess, S. (2002). Using Actor-Network Theory to Research the
Implementation of a B-B Portal for Regional SMEs in Melbourne, Australia.
*15th Bled Electronic Commerce Conference – 'eReality: Constructing the
eEconomy'*. Bled, Slovenia

Tatnall, A. & Gilding, A. (1999). Actor-network theory and information systems
research. *10th Australasian Conference on Information Systems (ACIS)*,
Wellington, Victoria University of Wellington.

Taylor, W. (2004). "The e-volution of the i-society in the business of e-
government", *Future Challenges for E-government*. Institute of Public
Administration Australia No. 2, Australian Government Information
Management Office, Canberra.

Taylor, J. & Burt, E. (2005). Voluntary organizations as e-democratic actors: Political identity, legitimacy and accountability and the need for new research. *Policy and Politics*, 33(4), 601−616.

Thangaratinam, S. & Redman, C. WE. (2005). The Delphi technique. *The Obstetrician & Gynaecologist*, 7, 120–125.

Thompson, D.F. (1976). *John Stuart Mill and Representative Government*. USA: Princeton University Press.

Trinidad, S., Aldridge, J. & Fraser, B. (2005). Development and use of an online learning environment survey. *Journal of Educational Technology*, 21(1), 60-81.

Tsaliki, L. (2002). Online forums and the enlargement of public space: Research findings from a European project. *Javnost-The Public*, 9(2), 95−112.

Tynan, B. & Colbran, S. (2006). Podcasting, student learning and expextations. Annual Conference of the Australasian Society of Computers in Learning in Tertiary Education, Sydney, Australia.

Ulziikhutag, O. & Sukhbaatar, S. (2006) *e-Government Key Challenges to Enhance Citizen Participation*. Retrieved from: http://www.apdip.net/projects/e-government/capblg/casestudies/Mongolia-Ulziikhutag.pdf

United Nations. (2003). *UN Global E-Government Survey 2003*. Retrieved from: http://unpanl.un.org/intradoc/groups/public/documents/un/ unpan0l6066.pdf

United Nations. (2004). *UN Global E-Government Readiness Report 2004: Towards Access for Opportunity*.
Retrieved from: http://www.unpan.org/egovernment5.asp

United Nations. (2005). *UN Global E-Government Readiness Report 2005: From E-government to E-Inclusion*. Retrieve from: http://unpanl.un.org/intradoc/groups/public/documents/un/unpan02l888.pdf

United Nations. (2008). *United Nations e-Government Survey 2008: From e-Government to Connected Governance*, Retrieved from: http://unpanl.un.org/intradoc/groups/public/documents/UN/UNPAN028607.pdf

United Nations. (2012). *United Nations e-Government Survey 2008: From e-Government to Connected Governance*, Retrieved from: http://unpanl.un.org/intradoc/groups/public/documents/un/unpan048065.pdf

Van Dijk, J. & Hacker, K.L. (2000). Models of Democracy and Concepts of Communication, in Hacker, K.L. & van Dijk, J. (eds.) *Digital Democracy issues of theory and practice*. CA: Sage Publications.

Vans, J. (1990). *Political analysis*. New York: Pitman.

Van Meter, K. (1990) Methodological and Design Issues: Techniques for Assessing the Representatives of Snowball Samples, *NIDA Research Monograph*, 31-43.

Van Zolingen, S. & Klaassen, C. (2003). Selection processes in a Delphi study about key qualifications in senior secondary vocational education. *Technological Forecasting & Social Change,* 70(4), 317-340. Retrieved from http://www.sciencedirect.com/ science/article/pii/S0040l62502002020

Verba et al., (1995). Voice and Equality: Civic Volunteerism in American Politics, in Badescu, G., Sum, P. & Uslaner, E.M. (2004). Civil Society Development and Democratic Values in Romania and Moldova, 2004 *East European Politics&Societies*, (18)(2), 316-341.

Walsham, G. & Sahay, S. (1999). GIS for district-level administration in India: Problems and opportunities, *MIS Quarterly*, 23(1), 39-66.

Webb, W. & Auriacombe, C. (2006). Research Design in Public Administration: Critical Considerations. *Journal of Public Administration, 41(3).* 588 - 602.

West, D.M. (2004). E-Government and the Transformation of Service Delivery and Citizen Attitudes. *Public Administration Review, 64(1),* 15-27.

West, D.M. (2005). *Digital Government: Technology and Public Sector Performance*. New York: Princeton University Press.

Whyte, A. & Macintosh, A. (2003). Representational politics in virtual urban places. *Environment and Planning*, 35(9), 1607−1627.

Wilhem, A. (2000). *Democracy in the Digital Age: Challenges to Political life in Cyberspace*. New York: Routledge.

Williams, S. H. (1976). Citizen participation in city and regional planning: an effective American methodology, *Town Planning Review*, 47, 349-358.

Williamson, G.R. (2005). Illustrating triangulation in mixed-methods nursing research. *Nurse Researcher*, 12, 7-17.

Wimmer, M.A. (2007). *Ontology for an e-participation virtual resource center*. Retrieved from: http://www.demo-net.org/demo/dissemination/repository/ icegov-l64-wimmer.pdf

Wimmer, M. & Bicking, M. (2006). *Roadmapping eGovernment RTD 2020: visions and conceptions of European Citizenship*. eGov Monitor.

Winkler, R. (2007). Online Deliberation: Towards a research framework for the assessment of online debates. *Understanding eParticipation: Contemporary PhD eParticipation research in Europe*. Örebro University library

Witkin, B. R. (1984). *Assessing needs in educational and social programs*. San Francisco, CA: Jossey-Bass Publishers.

Yin, R.K. (1994). *Case study research: design and methods*. Newbury Park: Sage.

Yin, R.K. (2003). *Case Study Research: Design and Methods*. Beverly Hills, CA: Sage Publications.

Young, I.M. (1990). *Throwing like a girl and other essays, in Feminist Philosophy and Social Theory*. USA: Indiana University Press.

Yang, K. (2006). Trust and citizen involvement decisions: Trust in citizens, trust in institutions, and propensity to trust. *Administration & Society*, 38(5), 573-595.

Zhiyuan, F. (2002). E-Government in Digital Era: Concept, Practice, and Development. *International Journal of The Computer, The Internet and Management*, (10)(2),1-22.

Zipfinger, S. (2007). *Computer Aided Delphi: An Experimental Study of Comparing Round Based with Real Time Implementation of the Method*. Austria: Trauner Verlag.

Zuraidah, Z., Farida, I. R., Anning I. N. A., Gunggut, H. & Umemoto, K. (2011). Language-in-Education Policy: A Study of Policy Adjustment Strategy in Malaysia*, International Journal of Education and Information Technologies*, 2(5), 157-165.