

## CHAPTER 2

### REVIEW OF THE LITERATURE

The review of the literature is presented in five parts. The first part is a general information about higher education in Thailand. The second part introduces the organizations which have significant roles on the policy of the Internet, both technical policy and operational policy. The third part is a review of the issues related to the Internet use, and the existing Internet Use policy of higher education institutions. The fourth part deals with the policy analysis concept. The fifth part is an introduction to policy research concepts and Ann Majchrzak's policy research methods, as it is the methodology employed in this study. The last part is a summary of the literature as an orientation of the present study.

#### HIGHER EDUCATION IN THAILAND

Education as a government function is relatively new in Thailand dating only from the last part of the 19<sup>th</sup> century. Until then, the only education of semi-public nature was that offered by the Buddhist monasteries. Only a very small portion of the population, mostly male, received any formal education. In the mid 1800s, the turning point was reached in the modernization of Thailand and the growth of western influence. King Chulalongkorn continued and greatly expanded the modernization process that his father (King Rama IV) had started. In his reign the influence of western education was strongly felt. Soon many centers of higher education were set up and they flourished.

## **1. History of Higher Education in Thailand**

The history of higher education in Thailand can thus be divided into three periods: the Early Modernization period, the Post-Revolution period, and the Development Planning period (Ministry of University Affairs, 1998).

### **1.1 The Early Modernization Period (1889-1931)**

The year 1889 was the beginning mark of higher education in Thailand. The country's first medical school, Siriraj Hospital, was founded in this year. Subsequently, there were establishments of other institutions, these included the law school in the Ministry of Justice in 1897, and the Engineering School at Hor Wang in 1913. The primary objective of these institutions was to train Thai youth for employment in the newly expanded government civil service. Chulalongkorn University, the first university in Thailand was instituted by the Royal Decree in 1917. The university was named Chulalongkorn in memory and in honor of King Rama V. It was elevated from the Civil Service College to a university status. Chulalongkorn University incorporated the existing schools of medicine and engineering with newly created faculties of Arts and Sciences, Law and Political Science.

### **1.2 The Post Revolution Period (1932-1949)**

Following the Revolution of 1932, the nation adopted a parliamentary democracy which necessitated a change to constitutional monarchy. There was a growing need for political leaders and civil servants to be educated on the principles of democracy and for the general public to have increased opportunities to higher education. Accordingly, the university of Moral and Political Science, now known as Thammasat University was founded in 1933.

More universities were created in 1943. These universities were the University of Medical Science (Mahidol University), the Agricultural University (Kasetsart

University) and the Fine Arts University (Silpakorn University). Again, the focus of these institutions was to produce competent personnel in specialized disciplines for government service and administration.

### 1.3 The Development Planning Period (1950-present)

The National Economic and Social Development Board (NESDB) was established in 1950. Since then, Thailand was set to embark on its modern course of planned development through a series of six and five-year economic plans. The very first was a six year plan, launched in 1961 where as successive plans covered the period of five years. There was tremendous expansion and change in Thailand's higher education system in this era.

As part of the decentralization program, three regional universities were established successively from 1964 to 1967, within a decade of the first national economic plan. These universities were Chiang Mai, Khon Kaen, and Prince of Songkla. Chiang Mai university is located in the north, Khon Kaen University is located in the northeast, and Prince of Songkla university is located in the south. Moreover, special attention was paid to promote engineering, agriculture, medicine and natural science as priority areas of study in the line with the nation's accelerated efforts for economic and social development.

Subsequently, the National Institute of Development Administration (NIDA) was established as a graduate institution specializing in administrative and national development. In 1967, Asian Institute of Technology (AIT) opened as an autonomous international graduate school, offering sciences and engineering to students from all over Asia and beyond.

Through the amalgamation of existing schools and colleges, other institutes and universities were formed. In 1971, King Mongkut's Institute of Technology

was created through the merging of several technical schools. Srinakarinwirot University was created in 1974. And Maejo Institute of Agricultural Technology, (subsequently become Maejo University) was upgraded from a college under the Ministry of Education to university status in 1975.

Apart from the establishments of the public university, the private universities and institutions began to play a role in higher education provision. The Sixth National Higher Education Development Plan (1989-1991) showed greater government's encouragement, particularly in terms of financial support for private tertiary institutions to further improve standards of education and to provide increased education programs. The private universities allow more of the kingdom's young to gain tertiary qualifications. To accommodate the social demand for higher education and the need to strengthen educational development of the country, the private universities were expanded both in Bangkok and in the provinces. Subsequently, private universities and colleges also started to offer international programs to enhance internationalization of Thai higher education.

In the 1990s, six more regional universities were established. These universities were Burapha University, Naresuan University, Mahasarakham University, Thaksin University, Ubon Ratchathani University, and Suranaree University of Technology. Some of these universities were once campuses of Srinakarinwirot University, such as Burapha in the eastern part of the country, Naresuan in the north, Makasarakham in the northeast, and Taksin in the south. Ubon Ratchathani University was formerly a part of Khon Kaen University, and was upgraded to a university status similar to the four campuses of Srinakarinwirot University.

During the Development Planning Period, there was a significant innovation, displayed by the initiation of two open universities. Ramkhamhaeng and Sukhothai Thammathirat universities were opened in 1971 and 1979, respectively. These

two universities provided an effective and economical way to respond to the growing public demand for access to higher education. Both made use of modern technologies such as radio and television to broadcast tutorials to a wider audience and the two universities presently share around sixty percent of all tertiary enrolments.

In 1990, the first public university in the country to operate independently from the government bureaucracy with its own autonomous administration system and with government financial support in the form of block grants was founded. This is Suranaree University of Technology. With the hope that Suranaree will become a model for other public universities seeking to become autonomous in the future. Walailak University the second of its kind is set up in Nakhon Si Thammarat and will open its doors to students in 1998. In addition, Mae Falang University, another autonomous university is being established in Chiang Rai, the northern part of the country, with a plan to have the first student enrolment in 1999.

## **2 Thailand Administration and System**

According to the National Scheme of Education of 1992, the educational system is designed to assure continuous and lifelong learning for individuals, so as to promote their wisdom, spiritual, physical and social development, and their contribution toward the progress of the nation under the democratic government with the King as head of State. The national education system provides an opportunity for individuals, development according to their ages and offers continuous and life-long learning, employing various forms of education, both in a school-related system of education and through the learning process from the ways of life.

### **2.1. Thailand's Education Administration**

Education in Thailand is administered by various ministries. At present, there are eleven ministries that are involved in the administration of national education.

At the national policy level, the Office of the National Education Commission under the Office of the Prime Minister oversees the long-term policy formulation and planning for development in all levels of education throughout the Kingdom.

There are two ministries responsibility for primary education, the Ministry of Interior and the Ministry of Education. The Ministry of Interior supervises primary education which is administered by municipal authorities, while the Ministry of Education is responsible for all other primary institutions.

The Ministry of University Affairs was established in 1973. The Ministry of University Affairs controls and supervises the public and private universities and institutions of higher learning.

Furthermore, there is also an education for special needs. This education is organized by various agencies and they have developed their own curricula which can be classified into four groups as follows.

**a. Curricula for professional soldiers and police**

Curricula of the military, naval, airforce and police cadets require 4 years of study after 2 years in Preparatory School for the Armed Forces Academics and Grade 10.

**b. Curricula for specific technicians**

These curricular include training military technicians to work in the armed forces and specific technicians for various agencies such as Irrigation College, Railway Technical School, etc.

**c. Medical science curricula**

It is a 4-year program for secondary school graduates to study in the institutions of the Ministry of Public Health, Bangkok Metropolitan Administration and the Thai Red Cross Society.

Apart from those mentioned earlier, there are two Buddhist Universities, Mahamakut Buddhist University and Mahachulalongkorn Buddhist University which are specifically for the higher religious studies by members of the Buddhist monkhood.

**d. Curricula for other specific purposes**

These types of curricula were designed for graduates from upper secondary school, both in general and vocational streams, as required by each institution, such as the Merchant Marine Training Center, Cooperative School, Postal School, and Civil Aviation Training Center, etc.

## **2.2. Thailand's Education System**

Education in school-related system is provided by the educational institutions, characterized by class system, and the use of curriculum specified for the level and type of education so as to develop learners in accordance with curriculum objectives. On the other hand, education from way-of-life learning process is self-learning from various sources of knowledge and environments related to ways of life naturally existing or modified to enhance and service learning.

Education in a school-related system is divided into four levels: pre-school education, primary education, secondary education and higher education.

1. **Pre-school Education** aims to prepare children for higher level education. It operates in the form of childcare and readiness development of children in physical, psychological, mental, emotional, personality, and social aspects.

The provision of education at this level can be organized in the forms of daycare center, kindergarten, or child development center, depending upon local conditions and target groups.

2. **Primary Education** aims to provide a basis for learners to retain literacy and arithmetic ability to form a desirable character that encompassed morality, ethics, basic knowledge and skills.

3. **Secondary Education** is divided into two parts, i.e., lower secondary and upper secondary education.

### 3.1 Lower Secondary Education

This level of education aims to promote learners' moral values, knowledge, ability and skills beyond the primary level. Furthermore, it aims to enable them to identify their needs and interests and to be aware of their aptitude both in general and vocational education. In addition, the objective of the lower secondary education is to develop the students' ability for work and occupational practices relevant to their age as well.

### 3.2 Upper Secondary Education

The upper secondary education aims to enable learners to progress according to their aptitude and interests and acquire the basics either for further studies to higher education or for working and pursuing a career suitable for their aptitude both as entrepreneurs and paid workers. Moreover, it aims to promote their moral values, ethics, and social skills necessary for work, pursuing a career and learning peaceful social lives.

4. **Higher Education** is divided into 3 levels. These levels are lower than bachelor's degree level, bachelor's degree level, and graduate level.

4.1 **Lower Than Bachelor's Degree Level** aims to promote learners' knowledge and vocational skills at middle level including their ability to initiate jobs and develop entrepreneurship.



**4.2 Bachelor's Degree Level** aims to promote learners' higher level of knowledge and vocational skills in various disciplines, especially ability, to apply theories to practices for both academic and professional development, to create and disseminate knowledge, to participate in national development in relation to economic, social, political, cultural and environmental aspects, and to promote the role of the nation in the world community.

**4.3 Graduate Level** aims to promote students' specialized knowledge and skills; to strive for academic progress and excellence, especially in studies, research and development of knowledge and technology in science, humanities and social sciences; and to facilitates the adoption of modern technology and local Thai wisdom for economic and social development instrumental to Thai society. In addition, education in a school-related system is provided for specific needs and target groups, some of which are:

**4.3.1 Teacher Education** aims to train and develop prospective as well as practicing teachers who have acquired moral values, knowledge, ability and skills in teaching and motivating learners to learn; to be mindful of professionalism, spirit and responsibility of teachers; to serve as a role model for learners regarding social behavior, life style and preservation of the national language and culture; to develop an inquiring mind and engage in continuous improvement of themselves and their teaching capacity; and to engage in community development as well as in rehabilitation, conservation and enrichment of local and national environment and culture.

**4.3.2 Vocational Education** aims to enable learners to develop vocational knowledge and skills useful for working both as entrepreneurs and as paid workers; and to make a decent living. Vocational Education can be organized in both formal and non-formal systems. In the formal system, vocational education is a development of occupational knowledge and skills relevant to each level of education

from primary to higher levels. It also includes development vocational education. In the non-formal system are short-course training programs in specific occupations for those needing to upgrade their knowledge and skills and occupations for those needing to upgrade their knowledge and skills on specific vocational skills and expertise which require a long period of training from childhood, such as dancing, music and sports. Such education can be provided in special institutes created for the purpose or incorporated in the general curricula.

**4.3.3 Special Education** aims to enable learners who are physically, mentally, psychologically, and emotionally handicapped to undertake learning suitable for their conditions and capability. On the other hand, it enables geniuses or talented learners to develop their aptitude to the fullest potential and maximize their ingenuity. Special education can be provided in special institutes or in general educational institutions from pre-school to higher education levels.

## **INTERNET ORGANIZATIONS**

The beginner users of the Internet wonder who controls the Internet. No one really controls the Internet. It seems to be both institutional and anti-institutional at the same time, massive and intimate, organized and chaotic (Laquey, 1994: 32). The Internet has no overall organizational, financial, political, or operational authority. Instead the Internet is operated by organizations, each with its own operation arm (Quarterman and Carl-Mitchell, 1994: 32). Nevertheless, no single organization or group of organizations has over all control or responsibility for the worldwide Internet. No organization is responsible for the operation the Internet. Instead, they are concerned with protocols and technical policy (Quarterman and Carl-Mitchell, 1994: 34). However, there are organizations that have influence on the Internet. Among these organizations, the NFSNet, the Internet Society and the Electronic Frontier Foundation are organizations that have significant roles and influences on the global operation of the Internet.

## 1. NSFNet

The policy body of the Internet moved from ARPA to a succession of committees of government agencies. The National Science Foundation (NSF) in the U.S. has taken a leading role in setting policy for the Internet in the U.S. since mid-1980s, partly due to its funding from NSFNET. NSFNET is the most prominent of the backbones with policies set by the U.S. government. Many regional networks connect to NSFNET, while about thousands of local networks at companies, universities, and agencies connect to the regional networks. Moreover, there are PSINet, Altr-Net, ANSnet, and several national backbones. Most of these backbones are not run by the government. In addition, there are other backbones in Europe, and in Japan, which are not controlled by the U.S. government.

## 2. Internet Society

The Internet Society (ISOC) is the international professional organization for global cooperation and coordination for the Internet and its internetworking technologies and application (Internet Society, 1998). It was established to encourage the evolution, standardization, and dissemination of information and communication technology (Krol, 1994: 429). At the international networking conference in Copenhagen, in June 1991, the Internet Society was announced. And it was brought into existence in January 1992 (Internet Society, 1998) by a worldwide cross-section of individuals and organizations. These groups of individuals and organizations recognized that the Society was a critical component necessary to evolve and globalize the Internet and technology and applications, and to enhance the availability and use of the Internet on the widest possible scale. It is incorporated as a not-for-profit corporation, with tax-deductible status in Washington DC, United States of America. The member of the Society consist of individuals, corporations, non-profit organizations, and government agencies. The permanent international headquarters and secretariat of the Internet Society is located at

Reston, Virginia. The Executive Director is the head of the Society. The Internet Society acts not only as a global clearinghouse for Internet information and education but also a facilitator and coordinator of Internet related initiatives around the world.

## 2.1 Internet Society Mission

The Internet Society mission statement is "To assure the beneficial, open evolution of the global Internet and its related internetworking technologies through leadership in standards, issues, and education." (Internet Society, 1998).

## 2.2 Internet Society Goal and Purpose

The purpose of the Internet Society is "to maintain and extend the development and availability of the Internet and its associated technologies and applications -- both as an end in itself, and as a means of enabling organizations, professions, and individuals worldwide to more effectively collaborate, cooperate, and innovate in their respective fields and interest" (Internet Society, 1998). In addition, the specific goals and purposes include:

- development, maintenance, evolution, and dissemination of standards for the Internet and its internetworking technologies and applications;
- growth and evolution of the Internet architecture;
- maintenance and evolution of effective administrative process necessary for operation of the global Internet and internets;
- harmonization of actions and activities at international levels to facilitate the development and availability of the Internet;
- collection and dissemination of information related to the Internet and internetworking, including histories and archives;
- assisting technologically develop countries, areas, and peoples in implementing and evolving their Internet infrastructure and use;
- liaison with other organizations, governments, and the general public for coordination, collaboration, and education in effecting the above purposes. "

(Internet Society, 1998)

### 2.3 Internet Society Guiding Principles

The Internet Society had developed the following principles on the Internet use:

- Open, unencumbered, beneficial use of the Internet.
- Self-regulated content providers; no prior censorship of on-line communications.
- On-line free expression is not restricted by other indirect means such as excessively restrictive governmental or private controls over computer hardware or software, telecommunications infrastructure, or other essential component of the Internet.
- Open forum for the development of standards and Internet technology
- No discrimination in use of the Internet on the basis of race, color, gender, language, religion, political or other opinion, national or social origin, property, birth or other status.
- Personal information generated on the Internet is neither misused nor used by another without informed consent of the principle.
- Internet users may encrypt their communication and information without restriction.
- Encouragement of cooperation between networks: Connectivity is its own reward, therefore network providers are rewarded by cooperation with each other."

(Internet Society, 1998).

### 3. Electronic Frontier Foundation

In 1990 the Electronic Frontier Foundation (EFF) was founded in Cambridge, Massachusetts, by Mitch Kapor and John Perry Barlow, with the involvement of John Gilmore (Gelman and McCandlish, 1998: xii). At present the foundation is located in Washington D.C. EFF exists to promote existing academic and personal freedoms in the

new worldwide computer society. It fights against things such as network censorship and for things such as freely available information. (Krol, 1994: 429).

### 3.1 Electronic Frontier Foundation Goals

The Electronic Frontier Foundation stated the goals of its organization as follows.

"- Maintaining our effort to inform and organize concerned citizens, and to foster directed action on crucial issues such as anticyptographic public-policy mistakes, unconstitutional legislation, ill-considered attempts to greatly expand law enforcement's and intelligence agencies' surveillance capabilities and authority, public access to government information and to communications media, and the unsettled and unsettling intersection of outmoded law and new media.

- Continuing to fight for the privacy of transactional data and to support the use and availability of strong encryption world-wide. Such privacy and security, and the technologies that make them possible, are essential to the continued growth and health of networked communications.

- Encouraging and assisting in the formation of "Electronic Frontiers" civil liberties advocacy group around the world, and organizing online and offline summits to forge a flexible alliance of grassroots activists acting locally on global issues when necessary, and acting globally on local issue when appropriate.

- Working for the development of legal definitions of the virtual community that are based not on physical location but on the voluntary association of such communities' constituents.

- Establishing a Cyberspace Law Institute to analyze and develop new forms of dispute resolution better adapted to the still-developing jurisdictions of cyberspace.

- Analyzing potential threats and contributions to the Net worldwide and building the information based necessary to produce an annual "State of

the Net" report that will study the Internet as an evolving system (using an ecology and organism model).

- Studying the condition of digital intellectual property rights and convening various interested parties to examine how value is currently being, and could be, exchange online (including, perhaps, a test-bed of digital cash and transaction schemes, with a particular focus on privacy and security issue).

(Gelman and McCandlish, 1998: 176-177).

#### **4. Center for Democracy and Technology**

Center for Democracy and Technology (CDT) is a nonprofit public-interest organization, based in Washington D.C. Its mission is "To develop public-policy solutions that advance constitutional civil liberties and democratic values in the new computer and communication media" (Gelman and McCandlish, 1998: 179). CDT pursues its mission through policy research, public education, and coalition building, legal, technical, and public-policy expertise on behalf of civil liberties goals. These include maximizing free speech and the free flow of information online, giving citizens more control over personal information, protecting privacy online, and guaranteeing public access to electronic government information.

#### **5. Computer Professionals for Social Responsibility**

Computer Professionals for Social Responsibility (CPSR) is a national-membership organization based in Palo Alto, California. CPSR conducts many activities to protect privacy and civil liberties (Gelman and McCandlish, 1998: 180). Membership is open to the public. CPSR maintains twenty-four local chapters in the United States and has several international affiliates. CPSR sponsors an annual conference, maintains a large Internet archive site of information, and sponsors working groups on civil liberties and other issues.

## **6. Electronic Privacy Information Center**

The Electronic Privacy Information Center (EPIC) is a public-interest research center in Washington D.C. It was established in 1994 to focus public attention on emerging privacy issues relating to the National Information Infrastructure - issues such as the Clipper Chip, the digital telephony proposal, medical record privacy, and the sale of consumer data (Gelman and McCandlish, 1998: 182). EPIC is sponsored by the Fund for Constitutional Government and Computer professionals for Social Responsibility.

## **THE INTERNET USE POLICY**

The higher education institutions are learning to deal with the explosive growth of networking, connecting every part of the campus community and linking to colleagues and information resources across the country and around the world (Educause, 1999). Today there are many issues that campuses are facing, these issues are related to the proliferation of campuswide networks and the Internet connectivity. Such issues are free speech, censorship, student records, privacy, ethical standards, defining "institutional information" on the World Wide Web, information environment, and so forth. Therefore, many institutions are moving toward establishing policies to deal with these issues.

There are two formats or guidelines to develop policy related to the use of the Internet. These are the Acceptable Use Policy and the Electronic Information Policy.

### **1. Acceptable Use Policy**

The Acceptable Use Policy (AUP) is the format of policy that is widely developed to govern the use of the Internet in organizations. According to the American



Library Association recommendation on the development of AUP, the AUP should cover these issues:

- a. an introduction explaining what the AUP covers
- b. the reason for having the AUP
- c. identify those covered by the policy
- d. provide examples of acceptable use and unacceptable use
- e. potential consequences for the violations
- f. clearly state the process for reporting inappropriate use.

## 2. Electronic Information Policies

It is important that every research institution and other institutions prepare and disseminate policies concerning the use, creation, and exchange of electronic information since the electronic information environment is emerging today. Electronic information policies require not only unique elements, but also an extension of existing information policies, if one exists. Moreover, electronic policies should describe roles and responsibilities of users and providers, and should address appropriate behaviors, both on campus systems and on the global Internet (Association of Research Libraries, August 1998).

The information Policies Committee of the Association of Research Libraries has prepared a checklist of issues to consider when drafting electronic information policies as a guide for universities and other institutions that are developing, reviewing, or revising electronic information policy. According to this checklist, there are ten issues that need to be taken into consideration when developing the electronic information policy for the institution. These issues are: introduction of the policy, access issues, electronic mail issues, Website and Web publishing issues, network use, coordination on campus, archiving, due process issues, definitions, and implementation and review

(Association of Research Libraries, August 1998). A description of the details of each issue follows:

## 2.1 Introduction of the policy

In the introduction part of the policy, it should state the need for and purpose of the developing policy. It should also contain an explanatory statement about the underlying values and principles guiding the policy.

Apart from the values of local importance to the institution, the Association of Research Libraries suggested other values as the following.

- a. Respect for freedom of inquiry and expression, and a vigorous opposition to censorship
- b. Respect for the rights of others, especially rights of privacy and confidentiality
- c. Respect for intellectual property
- d. Respect for all members of the community of users, including minors
- e. Respect for appropriate conduct in a public forum, including civility, respect for others, and respect for diversity.
- f. Respect for law, for due process, and for the presumption of innocence

Regarding the principles of the policy, the ARL suggested that "Everyone using the university information resources is expected to honor the values of her or his academic community, whose existence makes the use of those resources possible. Every users is also expected to be considerate of the needs of other users by making every reasonable effort not to impeded the ability of others to use those resources." In addition the Association of Research Libraries gave the examples of infringements that may included, but are not limited to, activities that:

- a. obstruct usage or deny access to others
- b. compromise privacy or confidentiality
- c. involve unauthorized use of computer accounts
- d. attempt to modify system facilities without authorization
- e. allow unauthorized access to private accounts
- f. involve unauthorized use of resources for a commercial enterprise
- g. violate intellectual property rights
- h. violate license agreements
- i. violate local, state, or federal laws

## **2.2 Access Issues**

There are five issues that need to be considered when developing the electronic information policy. These are:

- a. Delineation of who is assured access to what resources and within what time frames
- b. Different levels of access that are provided to different categories of users
- c. Use of public facilities (e.g., computing labs)
- d. Circumstances under which private equipment can be attached to publicly-owned or grant-funded equipment
- e. When access can be denied or revoked

## **2.3 Electronic Mail Issues**

According to the Association of Research Libraries, some issues regarding an electronic mail should be considered. These are:

- a. Delineation of when and to whom the institution can deny access to its electronic mail services
- b. The circumstances under which the institution can inspect, monitor, or disclose electronic mail, and the condition under which this can be done without the holder's consent
- c. Restrictions on personal use
- d. Restrictions on commercial, political, or religious use
- e. Use for union activities
- f. Use of anonymous mail, chain letters, mail reflectors, and listservs
- g. Forwarded mail after someone has left the institution
- h. Archiving
- i. Public records
- j. Libel and obscenity
- k. Additional issues raised because of the presence of the institutional identifier within the domain portion of an electronic mail address.

#### 2.4 Website and Web Publishing Issues

There are twelve issues that need to be considered about the website and the publishing on institution's website. These are:

- a. policies governing content on a website
- b. personal homepages, if permitted (question of content need to be managed carefully)
- c. restrictions on pointer and links to other websites
- d. restriction on the use of copyrighted material on website
- e. use of university or institutional logos and trademarks on websites
- f. definition of an "official" website of the institution, and a description of how such a designation is granted
- g. levels of use and traffic

- h. restrictions on anonymous websites
- i. use of commercial services
- j. Internet gambling
- k. Libel and obscenity
- l. Adherence to all local, state, and federal laws

## 2.5 Network Use

There are three major issues about the use of the network. These are:

- a. inappropriate use of the network (e.g., IP address spoofing, and other inappropriate actions)
- b. limits on amount of use
- c. expectations of the users concerning network security

## 2.6 Coordinating on Campus

When developing the electronic information policy, it should be conducted by a working group consisting of units of the institution. Campus units that may be involved in the process of writing the policies include:

- a. Campus library
- b. Information Technology unit
- c. Academic Computing
- d. Academic Affairs
- e. Legal Counsel
- f. Public Relations
- g. Faculty
- h. Student Affairs

## **2.7 Archiving**

The electronic information policy should include strategies for archiving or preserving electronic resources. All relevant campus or institutional units, such as Computing, Libraries, and Archives, should be consulted in order to determine the attendant responsibilities and procedures for electronic archiving.

## **2.8 Due Process Issues**

An information policy should identify the forms of redress available if policy violations occur and the processes that will be followed. It should delineate between those actions that transgress university rules and regulations concerning appropriate behavior and those actions that may involve violations of the law. In some instances, such as child pornography, and the institution's discretionary latitude may be severely restricted by federal statutes.

## **2.9 Definitions**

The definition of issues or terms for each campus may differ. It will be important for each campus or institution to determine relevant definitions (e.g., user, authorized user) and to include those definitions in the policy.

## **2.10 Implementation and review**

It is important that the policy be clear and unambiguous, and able to be understood by all users of electronic resources. The policy should also be made readily available to all users. Institutions ought to set forth a process for implementation and review, and determine how often the policy gets reviewed or revised.

## **ANN MAJCHRZAK METHODS FOR POLICY RESEARCH**

According to Ann Majchrzak, there are five major processes in conducting policy research. These processes are a) preparation for the study process, b) conceptualizing of the study process, c) technical analysis process, d) analysis of study recommendations process, and e) communication policy research study to policy decisionmakers process.

### **1. Preparation Process**

At the first phase of the policy research, preliminary knowledge about the social problem selected to be studied is acquired in order to determine the direction of the research. Preparatory activities consist primarily of gathering information on important issues concerning the environment of the policy issues selected to be studied. As research depends to such a large extent on the existing environment, achieving an understanding of that environment is essential. There are four issues concerning the environment of the policy issues selected to be studied that should be understood. The four issues are as follows (Majchrzak, 1984: 24):

#### **1.1 Policymaking context of the social problem**

There are four aspects of the policymaking context to be understood. First, major policy issues related to the social problem - past present and projected for the future needs to be understood. A second aspect is a process whereby policy decisions are made about the identified policy issues. The process of policy decision involves the communication channel, and policy mechanisms. A third aspect is the set of key actors or stakeholders. The final aspect is the power structure. These four aspects should be understood in the preparation process of the policy research.

### 1.2 Range of definitions and values held about the social problem

Apart from the policy context, the sociopolitical environment involves a range of definitions, assumptions, and values that stakeholders hold about the social problem. By acquiring an understanding of these opinions, the researchers can make preliminary judgements about how difficult it will be to do policy research on the selected problem.

### 1.3 Type of recommendations about the problem that will be feasible

A third issue which policy researchers should be familiar with concerns the type of recommendations that would be feasible given the particular sociopolitical environment. The answer to this question needs to be understood: "What types of recommendations advocating what general types of changes are acceptable and implementable?".

### 1.4 The needed resources for the study

The minimum type and level of resources needed and available to conduct the desired policy research study should be understood. However, if the resources is limited or the funding is reduced, the "smaller, quick studies" is the suggested rule in conducting to do the policy research study (Schmidt, 1982 cited in Majchrzak, 1984: 32).

In order to obtain the data and information to make an understanding of those aspects, Ann Majchrzak suggested an eight-step approach to gathering and synthesizing data and information. These eight steps are:

Step 1 Select social problem

Step 2 Identify key policy issues

Step 3 Analyze legislative history of policy issues



Step 4 Trace progress of previous research and change efforts

Step 5 Obtain organizational charts of decisionmaking bodies

Step 6 Draw model of policy making process

Step 7 Interview stakeholders

Step 8 Synthesize information

## 2. Conceptualizing of the study Process

After gathering data on the existing sociopolitical environment and deciding to conduct a policy research, the next process is the conceptualization of the study. Conceptualizing a policy research study involves the three following activities.

- a. Develop a preliminary model of the problem
- b. Formulate specific research questions
- c. Select research investigators

### 2.1 Develop a Preliminary Model

The first step in conceptualizing is the development of preliminary model of the social problems desired to be studied. Such model generally delineates the definitions, assumptions, values, and presumed causes of the problem. The developed model is only preliminary as it will be modified when the research process progresses. A preliminary model is relied primarily on the information gathered in the preparation process, as well as on any added literature review.

In developing a single model of the problem from available information, it is typically found that the stakeholders may actually hold conflicting models of the same social problem (Majchrzak, 1984: 44). In such a situation, the researcher will first try to build consensus among the stakeholders by developing new models of the social problem that accommodate all opinions. If consensus cannot be achieved in this fashion,

one of two opinions can be pursued. In developing a new model, firstly, the researcher will attempt to develop a more general model that appeals to "higher-order values". Higher-order values are those that the general public tends to accept as goals for the society at large. By appealing to these higher-order values with which most people agree, the researcher is more likely to obtain agreement on a single model of the social problem.

## **2.2 Formulate Specific Research Questions**

Specific research questions can be formulated after a preliminary model of the social problem is developed. Since these questions will be driven from the methodological plan and eventual implications of the study, their formulation should be undertaken with great care and deliberation (Majchrzak, 1984: 47). The process of formulating specific research questions involves four sequential steps.

### **Step 1 Decide on the type of impact desired**

The first step in formulating research questions is to decide on the type of impact the study should have on the policy environment.

### **Step 2 Select an aspect of social problem**

The second step in formulating research questions is to select an aspect or aspects of a social problem.

### **Step 3 Identify variable**

In completing the first and second steps, decisions about aspects of the social problem to be studied and the type of impact desired will have been made. These decisions will result in a set of variables for the social problem that could be included in the research effort.

### **Step 4 Formulating research questions**

After completing the activities in the previous steps, the research questions can be formulated.

### 2.3 Select research investigators

The final activity in conceptualizing the research study is the selection of the research investigators. Therefore, three decisions should be made (Majchrzak, 1984: 53):

- a. To conduct the study as a team or solo effort
- b. To choose researchers with appropriate disciplinary backgrounds
- c. To involve advisors in the study

### 3. Technical Analysis Process

Technical analysis refers to the examination of factors that may cause the social problem. As a result of this analysis, conclusions about causal factors are reached. From these conclusions, recommendations for lessening the impact of those factors on the social problem can be tentatively advanced. There are four major activities in doing technical analysis:

- a. Operationalized variables
- b. Design of study methodology
- c. Conduct of analysis in order to get results and conclusions
- d. Development of conclusions and tentative recommendations

#### 3.1 Operationalized Variables

At this stage, from the set of research questions that have been formulated, the variables are defined in terms of specific measurable indicators.

#### 3.2 Design of Study Methodology

Because policy research operates at the boundaries of research methodology, there is no single, comprehensive methodology for doing the technical analysis of policy research (Coleman 1975 cited in Majchrzak, 1984: 58). According to

Ann Majchrzak's suggestion in methods for technical analysis in the policy research, the methods that could be employed are focused synthesis\*, secondary analysis, field experiments, survey, case study, cost-benefit and cost effective analysis, and qualitative methods such as focused groups, in-depth-interview, and participant observation.

### 3.3 Conduct of analysis in order to get results and conclusion

After the method in conducting the technical analysis is designed, the following step is to conduct the study according to the design. The results of the technical analysis will help the researcher to draw conclusions from the technical analysis. This conclusion will lead to the development of tentative policy recommendations.

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\* Focused synthesis is somewhat akin to traditional literature reviews by involving the selective review of written materials and existing research findings relevant to the particular research questions. However, focused synthesis differs from traditional literature reviews by discussing information from a variety of sources beyond published articles. Another way that focused synthesis differs from traditional literature review is in its purpose. Literature reviews tend simply to describe set of research studies and identify gaps or areas needing more research. While focused synthesis will generally describe its sources, information sources are used only to extend to which they directly contribute to the overall synthesis. A final way in which focused syntheses and literature reviews differ is in the extent to which they stand alone. Most traditional literature reviews are used as precursors or background for later research. Gap identified by review are presumably filled by subsequent data collection effort. In contrast, focused synthesis tends to be used alone in technical analysis. The results of the synthesis are the results of the policy research effort. The recommendations presented are derived exclusively from the synthesized information, with no primary data collection. This method may be most appropriate when time is short and existing information is reliable and rare (Majchrzak, 1984: 59).

### **3.4 Development of conclusions and tentative recommendations**

Based on the results and conclusions of the technical analysis and the policy researcher's understanding of the sociopolitical environment; tentative policy opinions are developed. These options describe actions that can be taken at a policy level, given the conclusions of the policy research study. However, in developing tentative policy recommendations, sources of information other than the research conclusions should be used (Majchrzak, 1984:71).

## **4. Analysis of Study Recommendations Process**

The activities involved in an analysis of study recommendations include: analysis of implementation parameter, assessment of potential consequences of the recommendations, estimation of the probability that the recommendations will be adequately implemented, and the preparation of final recommendations

### **4.1 Analysis of implementation parameter**

In order to ensure that policy recommendations are feasible and acceptable, an analysis of the stakeholders and organizational parameters involved in the implementation of each recommendation will be done. The information for conducting such an analysis will need to be collected through fairly structured interviews with stakeholders, subject matter experts, individuals with previous relevant experience, and agents potentially responsible for implementation.

### **4.2 Predict potential consequences of recommendations**

The set of consequences caused by the policy recommendations should be predicted. There are three types of predictions that need to be made (Majchrzak, 1984: 83):

- a. possible intended and unintended effects of the recommendations
- b. possible interactive effects of the recommendation on other policies and programs
- c. direction likely to be followed if the recommendation is not implemented

#### 4.3 Estimating the probability of implementation

At this point, with the information of the stakeholders' power structure, the organizational structure involved in implementing the recommendation, the potential consequences of the recommendation, a subjective probability of implementation will be made. The subjective probability is a statement of the changes, or odds, that a recommendation is feasible and acceptable enough to be implemented adequately. The probability of implementation is subjective since it is based on information that is interpreted by the researcher.

#### 4.4 Preparation of the final recommendations

Having analyzed each study recommendation, it will have a set of subjective probabilities for each recommendation's being adequately implemented. The next step is to evaluate these implementation probabilities in light of the goals of the policy recommendations. Therefore the following question must be answered: "Is the probability sufficiently large to provide the recommendation with an opportunity to affect the social problem in the intended fashion?". However, if the probability is not sufficiently large, the following three questions will be considered.

- a. Accept the low implementation probability
- b. Change the goals of the recommendations
- c. Modify the recommendations

## 5. Communication of policy research study to policy decisionmakers

It will be exceedingly difficult for the researcher to ensure that the research findings and recommendations are implemented. In fact, without open, active, and constructive communication between the policy researcher and the policymakers, the policy research efforts will have little value.

Aside from increasing the likelihood that a policy research study will be used, close communicative relationships between policymakers and researchers offer several additional benefits as well. These benefits include the following:

- a. Teaching policymakers to appreciate constraints and realities of research to reduce the scepticism with which research is viewed.
- b. Teaching policy researchers about constraints and realities of the policymakers' world.
- d. Keeping policymakers knowledgeable about information that may be relevant in the future times
- e. Keeping policy researchers knowledgeable about changes in the policy arena that may affect the study

Amitai Etzioni (cited in Majchrzak, 1984: 92), a noted sociologist, suggests the four major guidelines to minimize the potential difficulties for communication with policy decisionmakers.

- a. communicate throughout the study
- b. communicate with different study users
- c. presentation in every effective means of communication
- d. oral communication is generally more effective than written

## POLICY MECHANISMS

Policy mechanisms was defined as tools or vehicles which are used by policymakers in order to support the policy and to achieve their policy objectives (Majchrzak, 1984: 25). Joseph Coates had developed types of policy mechanisms in 1978 (Majchrzak, 1984: 25), Table 2.1 shows types and samples of policy mechanisms according to Coates.

Coates divided the tools into five types: information related, financial, regulatory and control, operation of a policy action, and policy related function.

The first types of tools involves mechanisms that concerned with dissemination. This type of tool is appropriate for the situation that a social problem can be alleviated simply by exchanging information about the problem.

The second type of mechanism involves financial incentive and disincentives such as taxes, grants. This mechanism would be used if money was felt to provide the motivating forces for alleviating the social problem.

Regarding the third mechanism, regulatory and control measures, this type of tool attempts to alleviate social problems by constraining the range of activities in which an individual or organization can engage.

The forth type of mechanism concerns with the operation of a policy action. This tool will be used when the action is felt to be a constructive way for alleviating the social problems.

The final type of mechanism is a policy function. It has been referred to as "symbolic priority setting" (Nieman & Lovell, 1981 cited in Majchrzak, 1984: 25) or



"policy-related". Priority setting mechanisms involve recommendations which indicate that the problem is an important one and worth further attention.

It is important to understand which mechanisms are appropriate for which policy issues.

**Table 2.1** Joseph Coates concept on types of policy mechanisms

<i>types</i>	<i>Samples</i>
Information Related	Generation of information by means of data collection (e.g. census survey) Evaluation Technology assessment Monitoring Research and development Stimulation of interest Providing a forum Education Publicity
Financial Measures	Taxes Value added tax Grants Contracts Loans Reward for invention and innovation Incentives Embarking on funds Compensating for loss Allocating funds
Regulatory and Control Measures	Regulation/deregulation Legislative License Codes Quotas
Operation	Building facilities Operating facilities Demonstration Establishing support
Policy Related Function	Setting policy Setting priority Setting objective

(from Ann Majchrzak, 1984: 25)