

**FACILITIES MANAGEMENT SERVICE PERFORMANCE
IN A UNIVERSITY HEALTH CENTER**

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FACILITIES MANAGEMENT SERVICE PERFORMANCE
IN A UNIVERSITY HEALTH CENTER

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requirements for the award of the degree of
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DEDICATION

To my beloved parents, sisters and friends,
who made all this possible,
for their endless encouragement and unlimited patience.
May God bless you all.

Thanks for everything.

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ABSTRACT

Health care service is an important aspect of our lives. Thus, health care centers must meet the needs of communities by providing them with a comprehensive medical service to improve the health status of the entire community. The quality of physical facilities and health care services is important in achieving the functions of a health center. This research is conducted to investigate the services quality performance of UTM health center. Factors affecting customers' satisfaction and perception on services quality were investigated. In addition, the evaluation of health care services were also investigated based on customers' satisfaction level, in which five quality dimensions were used to evaluate the quality of services offered. Thus, a survey on customers' satisfaction measurement was carried out. A total of 145 sets questionnaires were distributed to the students and staffs of UTM. The data collected were analyzed by using frequency analysis, mean analysis, standard deviation analysis and content analysis. On the whole, the research findings revealed that the health care facilities and services provided by UTM health center meet the satisfaction of respondents under low satisfaction status. It was noted that the service dimension that did not meet respondents' satisfaction was in the quality of interaction, quality of object and quality of processes. In addition, research findings revealed that the major service quality dimensions that will affect users' service perception are competency and responsiveness of physicians, nurses and other health care staffs. This suggested that health care providers were the most important resources in providing quality health services to meet or surpass customers' needs and perceptions.

ABSTRAK

Perkhidmatan kesihatan merupakan suatu aspek yang penting dalam kehidupan kita. Maka, pusat kesihatan harus memenuhi keperluan masyarakat dengan menyediakan perkhidmatan kesihatan yang menyeluruh bagi meningkatkan status kesihatan seluruh masyarakat. Kualiti fasiliti fizikal dan perkhidmatan kesihatan adalah penting bagi mencapai fungsi-fungsi pusat kesihatan. Kajian ini dibuat untuk mengetahui prestasi kualiti perkhidmatan pusat kesihatan UTM. Faktor-faktor yang mempengaruhi kepuasan dan persepsi pelanggan terhadap kualiti perkhidmatan dikaji. Selain itu, penilaian perkhidmatan kesihatan juga dikaji berdasarkan kepada tahap kepuasan pelanggan, di mana lima dimensi kualiti digunakan untuk menilai kualiti perkhidmatan yang ditawarkan. Dengan demikian, tinjauan pada pengukuran kepuasan pelanggan dibuat. Sebanyak 145 set borang soal selidik diedarkan kepada mahasiswa dan kakitangan UTM. Data yang dikumpul dianalisis dengan menggunakan analisa frekuensi, analisa min, analisa deviasi standard dan analisa isi. Secara keseluruhan, penemuan kajian menunjukkan bahawa kemudahan kesihatan dan perkhidmatan yang disediakan oleh pusat kesihatan UTM memenuhi kepuasan responden dalam status kepuasan yang rendah. Catatan menunjukkan dimension perkhidmatan yang tidak memenuhi kepuasan responden adalah kualiti interaksi, quality objek dan quality proses. Selain itu, hasil kajian juga mendedahkan bahawa dimensi kualiti perkhidmatan utama yang akan mempengaruhi persepsi perkhidmatan pengguna adalah kecekapan dan respon doktor, jururawat dan kakitangan kesihatan yang lain. Hal ini menyarankan bahawa pembekal perkhidmatan kesihatan adalah sumber yang paling penting dalam menyediakan perkhidmatan kesihatan yang berkualiti untuk memenuhi atau melebihi keperluan dan persepsi pelanggan.

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LIST OF ABBREVIATIONS

3P	-	People, Process and Place
5Qs	-	Five Qualities
BIFM	-	British Institute of Facilities Management
CFM	-	Centre of Facilities Management
FAB	-	Faculty of Built Environment
FBB	-	Faculty of Biosciences and Bioengineering
FIMS	-	Facilities Information Management System
FKA	-	Faculty of Civil Engineering
FKE	-	Faculty of Electrical Engineering
FKKSA	-	Faculty of Natural Resource and Chemical Engineering
FKM	-	Faculty of Mechanical Engineering
FKSG	-	Faculty of Geoinformation Science and Engineering
FM	-	Facilities Management
FP	-	Faculty of Education
FPPSM	-	Faculty of Management and Human Resource Development
FPREE	-	Faculty of Petroleum & Renewable Energy Engineer
FS	-	Faculty of Science
FSKSM	-	Faculty of Computer Science and Information System
NGOs	-	Non-government Organizations
OSHA	-	Occupational Safety and Health Administration
PSZ	-	Perpustakaan Sultanah Zanariah
SPS	-	School of Graduate Studies
SPSS	-	Statistical Package for Social Sciences
TISMA	-	Total Information System for Medical Administration
UTM	-	University of Technology Malaysia
WHO	-	World Health Organization

LIST OF APPENDICES

APPENDICES	TITLE
1	Questionnaire
2	Statistical Package for Social Sciences (SPSS) Data

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Malaysian health care is a parallel structure with public and private sectors (Kamaliah *et al.*, 2009). Malaysian government, private sector and non-government organizations (NGOs) are the provider of health care for its people (Oral Health Division, Ministry of Health Malaysia, 2005). The primary provider of health services is Ministry of Health, wherein it delivers comprehensive medical, health, dental and pharmaceutical services for the nation (Kamaliah *et al.*, 2009). The public health services provided by the case study health center in University of Technology Malaysia are greatly subsidized or financially supported by government.

Health care system is focus on people and services, with technology playing a key-enabling role to provide an accessible, integrated, high quality and affordable health care system to the population (Amiruddin Hisan, 2006). Corresponding to current increasing number of community all over the country in this world, needs for health care is one of the main issues that often come into question. Therefore, effective management of health center facilities needs to be implemented with the intention of ensuring the quality of facilities and services provided meets users' needs and requirements. The discipline of managing these facilities is well-known as facilities management (Hishamuddin *et al.*, 2005).

British Institute of Facilities Management (BIFM) defined facilities management as the integration of multi-disciplinary activities within the built

environment and the management of their impact upon people and the workplace, whereas Centre of Facilities Management (CFM) define facilities management as the process by which an organization delivers and sustains a quality working environment and delivers quality support services to meet the organization's objectives at best cost (Maizan, 2009).

In order to ensure that there was an excellent services performance of the health center; hence, the vital elements of Facilities management must be well-managed. According to the definition of Facilities Management, these elements included the people, process and workplace. This means the health care staffs, environment of health center and delivery processes of health care services needed to be well-managed in order to provide quality health services for patients or users. Therefore, the excellent performance of health facilities and services will increase users' satisfaction.

Physical facilities in health center such as public waiting and physician's room should be effectively and sustainably managed and maintained with the intention that they are able to provide quality facilities and services needed by users to achieve the operational objectives of health center. Apart from this, effective and sustainable facilities management could also help to minimize operation disruption of services delivery. Hence, this could increase the satisfaction of users towards the facilities and services provided. Users' dissatisfaction will lead to poor image and performance of the health center.

Users' satisfaction is one of the goals to be achieved in a quality facility management. A quality facility refers to the extent to which a particular type of facilities is managed to meet users' needs and provide satisfaction to the user. Knowing users' satisfaction is the basis for knowing what is required by the user. Essential element in user satisfaction is to prioritize users' needs and formulate a method to reach the best. This is important in user services quality to satisfy users' expectations (Hishamuddin *et al.*, 2005).

1.2 Problem Statements

The introductory section above suggests that Facilities Management in health care centers is deals with provision of management on health care facilities with the intention of providing quality health services to customers, in addition to increase their satisfaction.

Malaysia is at this moment on the path towards achieving the status as a developed nation. Consequently, the society has to possess a quality health status. In comparison to neighboring countries, although Malaysian society these days is enjoying relatively high standards of living and the population is currently at a level of health which is above the average health status, but there are still several challenges for our society in the effort of ensuring the availability of sustained quality for health care and services. Therefore, there is a need to ensure the management of health care system and facilities is continually improves (Wong and Mohd Amin, 2005).

One of the problems occurred in the delivery process of health care services is the inefficiency and ineffectiveness of maintenance. There is a case reported in local newspaper (Star Newspaper, 28 Jan 2009) shown that nurses were injured after the ceiling of hospital collapses. The statement clearly shows the failure of facilities management system in the hospital. This gives to the effect that all of the facilities in health center, whether are physical facilities or in terms of services, must be well managed. The purpose of facilities management is to ensure that the quality of facilities and services that been provided to users is meeting their needs. The quality of health care facilities and services which not meeting their needs will have great influences on users' satisfaction.

At the same time, if the quality in terms of facilities service does not reached the satisfactory level, hence, the users' satisfaction will not be achieved and indirectly this will have a negative impact on their quality of life and productivity. Facilities manager should ensure that all facilities provided in health center meet the

needs of their users, especially in terms of comfort. According to Maizan *et al.* (2005), comfort is focused on building facilities in the health center. Failure of facilities services to functions properly will lead to discomfort of the users. Subsequently, this can cause them not paying adequate attention to the work and will indirectly lead to users dissatisfied with the services provided.

Besides, the quality of health care facilities and services provided to patients is increasingly discussed as a great issue. This issue is mainly about the lack of uses in modern technology (Mohamed, 2005). For instance, these problems refer to the health center without modern equipments will have strong adverse impact on patients' expectations on the quality of care respectively.

The environment of health center is also an issue on health care services delivery. According to Baum (2009), there were a lot of professional concerns regarding on public interest on the non-clinical environment of health center, as well as on the healthcare facilities. The problem is mainly aroused on the hygiene of health center. For instance, in the year of 2005, poor hygiene standard of health center was the major issue in United Kingdom. Poor hygiene standard on facilities and services offered by health care staffs will cause patients to feel unsecured when services are being provided. This refers to the low quality of health care services and facilities, for instance, poor standards of hygiene will increase the risk of contracting with infections (Whitehead *et al.*, 2007). However, the operations and management of non-clinical services such as cleaning, wider facilities and the like are also described as major challenges. The poor hygiene standard and services management problems will lead to dissatisfaction of patients or users on their expectations on cleanliness of the health services and healthcare environment (Baum, 2006).

Patients' dissatisfaction towards health center occurred when the health services provided do not give them what they need. Therefore, the health status of people will get worse when the public services are very low quality in caring aspects. In addition, (Zineldin, 2006a) argued problems like lacking of resources or the heavy work load of health care staffs will lead to the physicians and nurses to have insufficient time to provide more efficient services to patients. So, the low level of

efficiency will subsequently increase patients' dissatisfaction onto the facilities and services provided by health center (Zineldin, 2006a).

Besides, another apparent issue is about staff shortages in health center. This problem has great consequences in both personal and organizational aspect. On behalf of staff's personal aspect, shortages problems mean that they have to overwork. This will subsequently lead to staff's frustration. On the other hand, from organization or health center aspect, the consequences of staff shortages have the adverse impact on patient's care. Staff's overwork resulting from staff shortages problem may threaten the service capability and quality of patient care that could be provided by health care's staffs. Lacking of staff in a health center means the health center could not offer best care for their patients (Newman and Maylor, 2002). This will then results in the dissatisfaction of patients or users when they could not get the best health care as what they expected. For instance, less numbers of staff may cause slow responsiveness of physicians and nurses to patients' needs which will then lead to patients' dissatisfaction.

From the literature review (Hanan Al-Ahmadi and Roland, 2005) of research done in Saudi Arabia, the study shows that there is dissatisfaction of patients on some aspects of access. From the perspective of accessibility, there are 74.9% of patients dissatisfied with waiting time, 58.1% with waiting areas, 62.1% on confidentiality, 63.8% felt unsatisfied with the physical environment of the building, and last but not least, 64.7% of patients dissatisfied on explanation given on activities conducted during consultation. In addition, reveals on the literature of research carried out by Maizan *et al.* (2005) in Malaysia government hospital showing that amongst the facilities provided for visitors or patients, about 40% of the facilities are under unsatisfied status and most of the spaces in the hospital are not fulfilling the satisfactory.

Based on these researches done in Arab Saudi (Hanan Al-Ahmadi and Roland, 2005) and Malaysia public hospital (Maizan *et al.*, 2005), there are occurrence issues that patients or users felt dissatisfied with that particular environment of health centre. Therefore, from this gap, question arises in this research is "How do the users of

health centre in Malaysia's university feels about the current facilities and services provided?" In order to answer this question, a questionnaires study will be conduct in University of Technology Malaysia (UTM) to assess how the users in UTM feel on their health centre.

Therefore, this research is conducted based on the formulation of two research questions. These research questions are shown as the following:

- a) What factors affecting students and staffs' satisfaction towards the facilities management services provided by University of Technology Malaysia's health center?
- b) Are the students and staffs satisfied with the facilities management services provided by University of Technology Malaysia's health center?

Thus, this study aims to investigate the answer for the above research questions.

1.3 Objective of the Study

From the research questions described above, the following objectives are set out to evaluate the services performance of health care provided by University of Technology Malaysia's health center:

- a) identify factors that affect users' satisfaction towards the facilities management services in a university's health center
- b) identify level of users' satisfaction towards the facilities management services in a university's health center

1.4 Scope of the Study

Due to times and resources constraints, the scope of the study had been focused on:

- a) This study will focus on users' (University of Technology Malaysia's staffs and students) satisfaction level towards the facilities management services provided in University of Technology Malaysia health center
- b) The questionnaire forms are distributed to students (external users) and staffs (internal users) in University of Technology Malaysia. This study will mainly focusing on the external users (students) of the university for the reason that students are the main users of the health center's facilities

1.5 Research Methodology

Research methodology is seen as an approach of how the research is being conducted. In this research, both the qualitative and quantitative research methodology will be used. Research methodology is divided into five stages so as to achieve the research objectives. The following stages are the research methodology in this study.

Stage 1: Preliminary Research

This research stage focused on collecting potential and relevant information, as well as current issues or core problems on health center's facilities management services. The process of gathering relevant reading materials is very essential with the aim of determining the research's objectives. Information collected from potential sources of reading materials, such as journals, articles, books, newspaper, internet, theses or dissertations will assist researcher in finalizing the research's objectives and research scope.

By this stage, researcher is required to come to a decision on the research area and research topic or statement. Once the field of study and research title has been identified, subsequently, it have to be followed by determine the clear research objectives, problem statements, scope of study and a draft for the table of content.

Stage 2: Literature Review

Literature Review functioned to provide the knowledge available to the research background (Kumar, 2005) besides strengthening the research objectives. Two readily available sources of reading materials are (1) published materials which included books, journals, articles, newspaper and internet webpage; as well as (2) unpublished materials such as theses and dissertations. The information resources are available at the university's library Perpustakaan Sultanah Zanariah (PSZ) and electronic databases of UTM. Keywords such as facilities management, health center facilities and services, quality dimensions and customer's satisfaction had been used in the literature search. Relevant literature search information will be acquired, deployed and evaluated systematically.

Stage 3: Data Collection

After decided the research topic and completed the literature review search, data collection stage must be carried out with the intention of searching for masses information to support the entire research. Data are the essential raw materials of any research (Walliman, 2006). Data collection may be divided into two main approaches in the form of primary data and secondary data.

a) Primary Data

The primary data are data which are being observed, recorded or collected by the researcher for the specific purpose of answering the research problems (Walliman, 2006). Primary data for this research is obtained through survey by means of questionnaires forms, distributed to a large

amount of staffs (internal customers) and students (external customers) in UTM. From the questionnaires, respondents' opinions and views are gathered with the purpose of indicate the factors that affect users' satisfaction (students and staffs) on the facilities management services provided in UTM's health center and the satisfaction level of respondents towards facilities management services provided in UTM's health center. The primary data is collected from questionnaires which are made up of Likert Scale questions by using a four-point and five-point.

b) Secondary Data

Secondary data had been gathered with the intention of provide relevant information to support the entire research. Information compiled from various written and published sources can become the literature review search. These data can be collected from seminar papers, books, journal articles, newspapers, internet webpage, theses, dissertations and the like. All of these sources are obtained from university's libraries or information centre of faculty. The secondary data, which referred to the literature review, provides sufficient and strong knowledge and comprehensible understanding of the research topic, hence, helping to achieve the research's objectives.

Stage 4: Data Analysis

Data analysis can be defined as a process of converting the collected research data into meaningful information or statements that could helps in answering research's questions by generating results or findings. Once the questionnaires are collected from respondents, the data will be analyzed by using the Statistical Package for Social Sciences (SPSS) software, frequency analysis, mean analysis, standard deviation analysis and content analysis to produce and analyze the research results.

Step 5: Conclusions and Recommendations

The final stage of the research is to writing up conclusion for the results obtained on data analysis and come up with a summary of the research. The conclusion should clearly relate the results obtained to the research objectives through the writing of research's findings. Besides the research findings and discussions, research limitations, problems encountered during the process of carry out research and useful recommendations will also be included in the research for further study. This stage ends up once all of the information are gathered, arranged, presented and documented accordingly to the proper standard format.

1.6 Significance of the Study

This research embarked on case study approach. The case study for this research is Health Center in University of Technology Malaysia, campus Skudai, Johor Darul Takzim. Research undertaken is expected to contribute to the knowledge and as reference in the field of facilities management, particularly for UTM's health center. Thus, it is expected to determine the direction of the management of health center's facilities that can helps in improving its implementation's efficiency.

In addition, this study is hoping to assists UTM's health center to understand and manage their users' (staffs and students) needs and requirements, besides deliver good quality health care facilities and services in order to satisfy their users. Meanwhile, this study also aids the health center to understand the level of users' satisfaction, and method in improving and achieving the health center's objectives. Measurement of users' satisfaction can after that integrated into an overall measurement of clinical quality (S. Mortazavi *et al.*, 2009).

The research undertaken is expected to offer benefits to external users (students) by providing them with high quality of health care services and facilities in order to satisfy their requirements. It also expected to benefits internal users (staffs)

by improving and enhances their work productivity; hence, they could deliver good services in their daily operation.

Important information such as by knowing what the users want and what they declare about the medical and current situation of health care deliverance, health care services can subsequently be improved (A.L Khalib and R. Nirmalini, 2008). This significant evidence-based information is an important tool in assisting health care providers to deliver better services because it clearly defines problems regards to health care services delivery (A.L Khalib and R. Nirmalini, 2008). As a service sector, the health services improvement efforts of UTM health center helps to gain confidences and loyalty of users in order that they may re-patronage the health center (S. Mortazavi *et al.*, 2009).

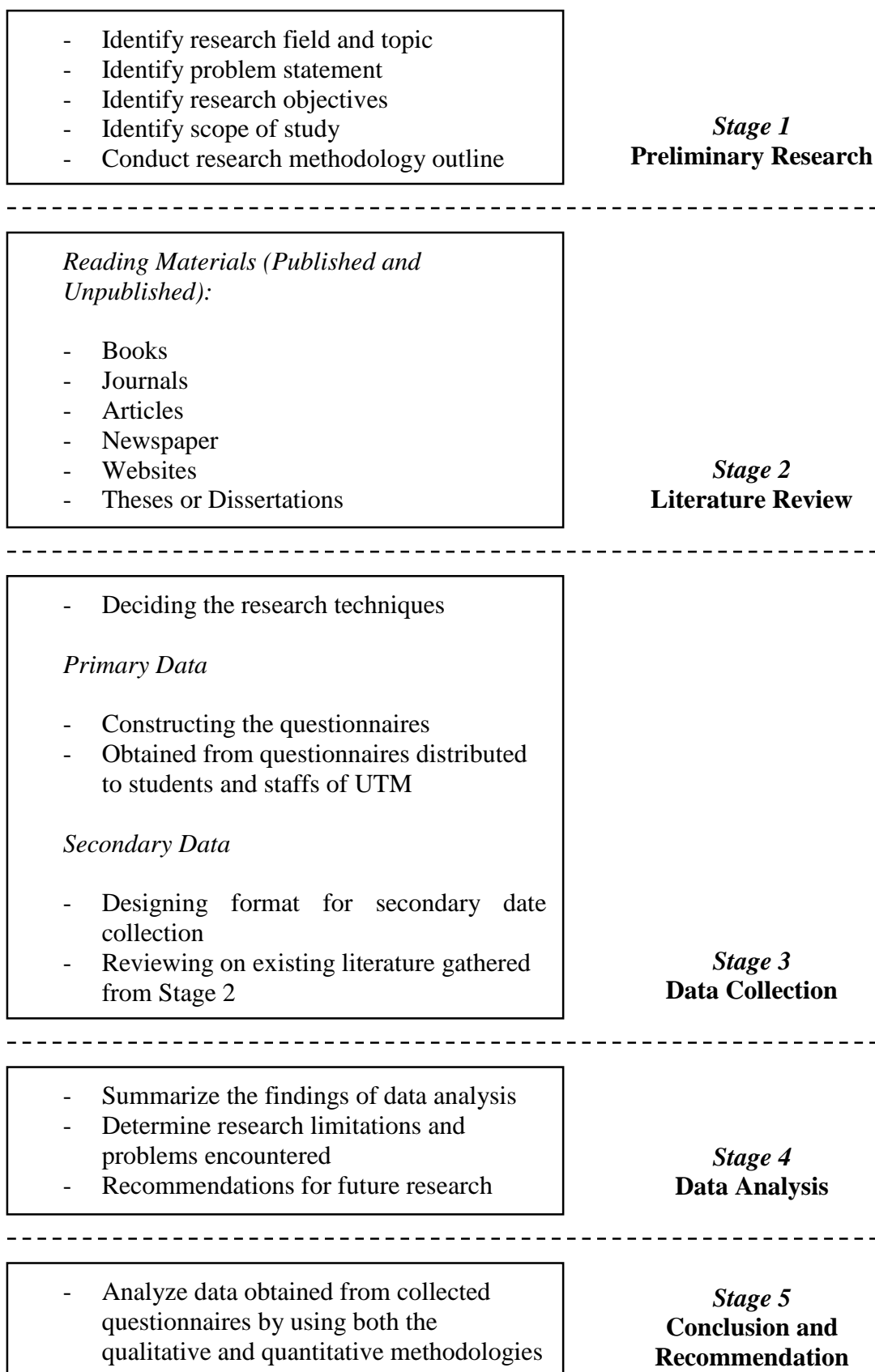


Figure 1.1: Theoretical Structure of Research

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