

**STRATEGIC INFORMATION SYSTEMS PLANNING  
AND THE MANAGEMENT OF UGANDA  
MARTYRS UNIVERSITY**

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A Thesis

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In Partial Fulfillment of the Requirements for the Degree

Master of Business Administration (IT)

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October, 2012



### **DECLARATION A**

"This thesis is my original work and has not been presented for a Degree or any other academic award in any University or Institution of Learning".

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Name and Signature of Candidate

31/10/2012

Date

## DECLARATION B

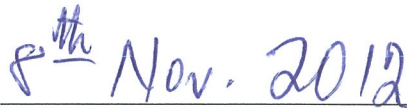
"I/We confirm that the work reported in this dissertation was carried out by the candidate under my/our supervision".



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Date

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Date

## APPROVAL SHEET

This thesis entitled" **STRATEGIC INFORMATION SYSTEMS PLANNING AND THE MANAGEMENT OF UGANDA MARTYRS UNIVERSITY**" prepared and submitted by **Kule Abraham** in partial fulfillment of the requirements for the degree of Master of Business Administration(Information Technology) has been examined and approved by the panel on oral examination with a grade of PASSED.

  
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## **DEDICATION**

This work is dedicated to the researcher's mum Mrs. Mary Byasaki MUHINDO and his brother-in-law Mr. Joseph BALUKU and his wife Thereza Baluku KIIIZA.

## **ACKNOWLEDGEMENT**

The researcher is very grateful to God Almighty who has always made his every effort possible. Secondly, this work would not have been accomplished without the sponsorship from The International Development Research Centre-Canada (IDRC) through the University Of Nairobi School Of Informatics Southern Junior Researchers' Awards in ICT for Development. The award the researcher received from them made it possible for him to study and carry out research without any hiccups. The researcher could not have also accomplished without the contributions of his academic mentors, friends and family members. In this regard the researcher wishes to express his gratitude to his supervisor Dr. PETER JEHOPIO for his intellectual guidance, support, continuous enthusiasm and encouragement given to him at every stage of the study as well as his ability to conceptualize and guide the study to the end. Your knowledge and experience in the field of information systems gave an intellectual shape of this study.

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The researcher is very grateful to Uganda Martyrs University Management for allowing him to conduct this research from their University. He is grateful as well to the respondents that provided the information needed for this thesis.

## **ABSTRACT**

The study assessed the effect of Strategic Information Systems Planning (SISP) on the management of Uganda Martyrs University (UMU) on five objectives :(1) To determine the profile of the respondents in terms of departments and job description. (2) To investigate the significant factors relevant to UMU for effective SISP. (3) To identify the gaps of SISP in UMU. (4) Investigate the level of implementation of the different tasks necessary for SISP in UMU. (5) To establish the relationship between SISP and the management of UMU. The research employed a descriptive correlation design, used a structured questionnaire to collect data from 128 respondents, sample size determined using Sloven's formula. The data was analysed using frequencies, means and SPSS. The findings reveal that: 1) Lectures and administrators form the majority of UMU management with the management team as the least. 2) There are significant factors necessary for an effective SISP. An absence or neglect of one or more of these factors will have an effect on SISP. 3) UMU uses bottom up methodology and ICT personnel for SISP. 4) Most of the tasks used in SISP at UMU are poorly implemented. 5) There is a significant relationship between SISP and the management of UMU. 6) SISP can predict the level of management in UMU. The researcher recommends that: 1) UMU should effectively use the critical success factors to achieve an effective SISP process. 2) UMU should fill the gaps identified during SISP. 3) UMU should use the Top-down approach for SISP. 4) UMU should satisfactorily implement the different tasks of SISP to enhance its Information Systems planning for better management of the University.

## **LIST OF ACRONYMS**

CSFs	Critical Success Factors
DFDs	Data Flow Diagrams
ICT	Information Communication Technology
IS	Information Systems
ISP	Information Systems Planning
IT	Information Technology
	Malaysian Administrative Modernization and
MAMPU	Management Planning Unit
SISP	Strategic Information Systems Planning
UMU	Uganda Martyrs University



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## **CHAPTER ONE**

### **THE PROBLEM AND ITS SCOPE**

#### **Background of the Study**

Strategic Information Systems Planning has been a topic of considerable importance and interest to Information System (IS) professionals in both business and academic communities since the 1970s (Pollack, 2010). Today, because information systems serve as the driver of many organisational transformations, there is increased pressure on organisations to leverage their investments in technology and information systems. Pollack (ibid) states that success usually occurs when an organisation is able to achieve congruence between information system and organisational planning and this is achieved when the technical and general managers of an organisation work collaboratively. The strategic information system planning is intended to ensure that technology activities are properly aligned with the evolving needs and strategies of the organisation.

Information System Planning (ISP) has changed considerably since its inception as an operational planning tool, expanding its scope to address key business objectives and forging a link with strategic business planning. A great deal of attention is focused on identifying and developing strategic information systems (Hufnagel, 1987). Information Technology (IT) has brought business practices a revolution and serves as a significant element in business strategies (Lev, 2010). Information Systems, enabled by sophisticated technology, among subsidiaries and branches or even inter companies, can help enterprises adapt swiftly to the ever changing business environment, providing new forms of design, manufacture, distribution and customer services (Ibid, 2010).

In the process of IT, enterprises need an efficient and mature Strategic Information Systems Plan (SISP). With a proper SISP,

enterprises can use IT more competitively, identify new and higher pay back IT applications, and better forecast IT resources.

The SISP within educational institutions according to Lev (ibid) is of primary significance for the successful integration of a campus wide information system. Campus Wide Information System should integrate all information into a single platform to ensure that academic and administrative activities are managed systematically. In the context of teaching and research, IT can facilitate the process of creating, sharing and diffusing information.

Selemat, et al (2006) state that the objectives of SISP may include aligning IT with business, gaining competitive advantage, identifying new and higher pay back applications, identifying strategic applications, increasing top management commitment, improving communications with users, forecasting resource requirements, aligning IT resources, developing an information architecture and increasing the visibility of IT.

In Uganda, several companies and universities are employing IT to help in the management process. Uganda Martyrs University is no exception to the employment of IT in its operations in view of fulfilling the mission of being a university that makes a difference. It has fully fledged departments of Information Systems and Information and Communication Technology which are required to help the university to fully utilise the Information Technology and different information systems to make a difference in its management.

## **Statement of the Problem**

Uganda Martyrs University has through the years strived to make a difference in its core responsibilities of research, teaching and outreach. There are however indicators that things are not going well because the ICT services are going down, some leaders have been accused of corruption and not planning well for its IT and IS (Abdu 2011). This in the

end leads to poor alignment of IT and Information Systems for the university to achieve its mission.

Despite the importance of effective Strategic Information System Planning on management, Uganda Martyrs University (UMU) does not have an effective framework for Strategic Information System Planning. The factors contributing to the lack of an effective framework for Strategic Information System Planning in UMU and similar Institutions of higher learning in developing countries have not been researched, reported on and internalised by academicians.

### **Purposes of the Study**

The purposes of the study were the following:

1. Determine the cause and effect of the two variables
2. Describe the relationship between strategic information systems planning and the management of Uganda Martyrs University
3. Test the relationship of “no significant relationship between strategic information systems planning and the management of Uganda Martyrs University.
4. Determine if strategic information systems planning can predict management of Uganda Martyrs University.
5. Bridge the gaps of previous studies and to validate existing information based on the theory to which this study is based.

**General:** This study determined the correlation between strategic information systems planning and the management of Uganda Martyrs University.

**Specific:** The study further sought:

1. The demographic characteristics of the respondents in terms of:
  - 1.1 Departments

## 1.2 Job description

2. The significant factors relevant to Uganda Martyrs University for effective Strategic Information Systems Planning.
3. The gaps of Strategic Information Systems Planning in Uganda Martyrs University.
4. The implementation of the different tasks necessary for Strategic Information System Planning in Uganda Martyrs University
5. The relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University.

## Research Questions

The study was guided by the following questions:

1. What are the demographic characteristics of the respondents in terms of:
  - 1.1 Departments?
  - 1.2 Job description?
2. What are the significant factors relevant to Uganda Martyrs University for effective Strategic Information Systems Planning?
3. What are the gaps of Strategic Information Systems Planning in Uganda Martyrs University?
4. Is there a significant relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University?

## Null Hypotheses

1. There is no significant relationship between strategic information systems planning and the management of Uganda Martyrs University.

## **Scope**

### ***Geographical scope***

The study was confined to Uganda Martyrs University (UMU) in Uganda because UMU is one of the private Universities in Uganda with meager resources yet investing in ICT and the researcher was interested in a private university.

### ***Theoretical scope***

A contingency model by Bechor et al (2009) for estimating the success of strategic information systems planning was the only underlying theory in the study.

### ***Content scope***

The researcher identified the gaps and deficiencies of Strategic Information Systems Planning, investigated the significant factors and their interrelationships relevant to UMU for effective Strategic Information Systems Planning using a questionnaire, and developed a framework for effective Strategic Information Systems Planning in UMU using observation and document analysis.

### ***Time scope***

The research was limited to the period between 2000-2010 when the University started to invest heavily in Information and Communication Technology.

## **Significance of the Study**

The study was important because it identified the gaps and deficiencies of Strategic Information Systems Planning in Uganda Martyrs University (UMU); it made use of these gaps and deficiencies with the proposition of respondents and insight from literature to propose a framework of an effective strategic information systems planning to the UMU

planners, since Strategic Information Systems Planning is very important for management of the university.

The study also brings out the significant factors and their interrelationships relevant to UMU for effective Strategic Information Systems Planning.

The study brings out the relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University which is good for the managers of the university.

The study showed that Strategic Information Systems Planning can predict the levels of management of the university.

The study will instigate further research in the framework developed if it could help in effective strategic information systems planning in universities.

### **Operational Definitions of Key Terms**

**Contingency model** is the underlying theory of this research where by Strategic Information Systems Planning success is a result of the key success factors.

**Effectiveness** is where strategic information systems planning will be assessed on known criterion and see if it meets the required minimum standards.

**Significant factors** are the key success factors and the strategic information systems planning environment that enable effective strategic information systems planning process in the university.

**Strategic Information Systems Planning** is the process of identifying a portfolio of computer-based applications that will assist an organisation in executing its business plans and realising its business goals. Carrying it



out is a critical challenge for many information systems and business executives.

**Management** is how the university goes on with its core functions of teaching, research and outreach as well as other daily routine activities that require planning, directing, organizing and staffing.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **Concepts, Ideas, Opinions From Authors/Experts**

##### **Strategic Information System Planning**

Pollack (2010), states that Strategic information systems planning was previously the work of technology and systems professionals but has now changed to be a collaborative planning challenge of parties including top managers, business unit managers, technology and systems professionals, and sometimes external stakeholders. Indeed some universities still have the traditional view of having the systems professionals and technology to carry out Strategic Information Systems Planning. It is important that planning becomes a partnership among those with technical skills, information systems group, and the general and functional managers of the organisation.

The planning process requires discussion, clarification, negotiation and the achievement of a mutual understanding (Piccoli 2008; McNurlin, et al.,2009). With today's rapidly evolving technology advances, along with the some what unpredictable emergence of new competitors brought about by the Internet, organizations do not have a year to develop a plan, several years to implement the plan, and a three to five year useful life for the plan (Piccoli, ibid). Due to the rapidly changing technology environment, Piccoli, ibid suggests that a sense and respond approach to planning is appropriate. The intended result of the planning process is to arrive at an Information System Strategy. Allen (2005) says that the outcome document from this planning process should be a comprehensive report along with plans for the development of systems oriented to some future vision of the role of information systems within an organisation.

According to Malaysian Administrative Modernization and Management Planning Unit (MAMPU) (2003), the planning process should

involve analysing the Business and ICT environment, develop ICT strategy and develop implementation plan. These are the four important stages of Strategic Information Systems Planning (SISP). Each stage consists several phases which also comprise several tasks. This is similar to Selemat, et al (2006) in the framework of SISP in higher institutions. For them, SISP process will entail defining the SISP scope and the implementation plan for the SISP project, analysing the university and ICT environments, formulating the IS/IT strategy, formulating IS/IT management strategy and implementation of SISP.

To have an effective strategic IS plan is far from easy. According to Lederer and Sethi (1996) the critical success factors (CSFs) of the strategic IS plan are identification of strategic applications, alignment of IT and business needs, and improved communication about IT with users. Earl (1993), Teo, Ang & Pavri (1997), Teo & King (1999) say the CSFs are top management involvement, top management support, good user-IS relationship and business strategy being available. A significance of top management in SIS planning has also been studied by Jarvenpaa and Ives (1991) suggesting that executive involvement (a psychological state) is more strongly associated with the firm's progressive use of IT than executive participation (actual behaviors) in IT activities.

For Groznik & Spremic (2006), getting the top management support for the planning efforts with having a clear cut corporate plan to guide the IS planning efforts is a big challenge to SISP. Of great importance too is the ability to obtain qualified personnel and having a good user-Information System relationship. The other challenges cited are mainly related to planning that is time management, environment changes and planning procedure.

## **University management**

Management is generally defined as the art and science of getting things done through others (Allen 1998). This definition emphasizes that a manager plans and guides the work of other people.

Management in all business, universities and organizational activities is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively (Wikipedia 2012). Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources and natural resources.

Since organizations can be viewed as systems, management can also be defined as human action, including design, to facilitate the production of useful outcomes from a system. This view opens the opportunity to 'manage' oneself, a pre-requisite to attempting to manage others (Wikipedia, *ibid*).

Duke, (2002), says that management of a university is about managing people, resources, cooperation, communication and using Information Technology, managing the academic enterprise in terms of research; curriculum, teaching and learning, quality and outreach in post modern times.

On the other hand, Watson, (2000), says that management of a university is all about managing the external perspectives, the internal perspectives and managing strategy. External perspectives include the management of the stakeholders, scanning the horizon, collaboration and complementarity, public relations and reputation positioning of the university. The internal perspectives are about governance and the

planning framework. Managing strategy is about managing continuity and change, optimizing the cooperation and ensuring satisfaction.

### **Strategic Information Systems planning and University management**

Several studies have been undertaken to find out how many organizations are undertaking the strategic IS planning process. Lederer & Sethi (1996), Pavri & Ang (1995), Teo, Ang & Pavri (1997) found that 56percent, 48percent and 63 percent, respectively, of those surveyed had a strategic IS plan. Similarly, Lev (2010), found out that 3 of the 5 institutions in Yangpu District had completed SISP integration, 1 was in the integration stage and 1 in the planning stage. Groznik & Spremic (2006) found out that over 50 percent of the responding companies in Slovenia performed some form of SISP process.

Results from prior studies suggest that higher education institutions still lack comprehensive strategic Information System Plans. For example, according to Lev (2010), the university of California revealed that IT usage at two universities in the USA lack comprehensive plans especially regarding issues related to IT governance, funding and structure. A similar research by Lev (2010), showed that most higher education intuitions in Thailand lack understanding and experience of Strategic Information System planning, which limits the progress of IT developments in most institutions. The Malaysian Administrative Modernization and Management Unit (MAMPU) found in 2005 that 7 of 48 private universities and colleges in Malaysia that participated in the study had implemented SISP.

Piccoli as cited by Pollack (2010) says that strategic information systems planning is a lengthy and rigorous ordeal and that there is no short cut to the planning process. This process unfolds into five phases according to him:

- i. Strategic business planning-which is a prerequisite to systems planning and consists of mission, future direction, targets and strategy.
- ii. Information systems assessment-which is evaluation of current information system resources and how well they are serving the organisation.
- iii. Information systems vision-ideal role that should be pursued for use of information system resources
- iv. Information systems guidelines-set of statements that articulate use of organisation's technical and information systems resources
- v. Strategic initiatives-three to five long term proposals that stipulate new initiatives for information system organisation

Hsu & Pant (1995) say that planning for information systems as for any other system begins with the identification of needs. They continue to say that strategic information systems planning in the present era is not an easy task because such a process is deeply embedded in business processes.

The rapid changes in information technology and business environment have challenged the organisational capabilities in planning the appropriate information systems technology strategies of organisations. SISP consistently remains as one of the top managerial concerns and there is a need to improve SISP (Abu Bakar et al 2009).

Abu Bakar et al (2009) say that for SISP process to be effective, there should be the ability of both IT and business managers to transform and exploit their knowledge for improving the organisation of SISP processes. SISP process effectiveness is a common indicator of SISP success. SISP studies from Kunnathur & Shi (2001), Lee & Pai (2003) concluded that SISP process effectiveness is vital to SISP success.

Selemat, et al (2006) state that the extend SISP fulfills the key objectives for an organisation offers a way to assess SISP success. Objectives of SISP according to Selemat may include aligning IT with business, gaining competitive advantage, identifying new and higher pay back applications, identifying strategic applications, increasing top management commitment, improving communications with users, forecasting resource requirements, aligning IT resources, developing an information architecture and increasing the visibility of IT.

To perform SISP, an organisation usually carries out a major intensive study following one of several well defined and documented methodologies (Selemat, et al 2006). SISP basically addresses four general issues: aligning IS/IT plan with the organisational business plan, designing IST/IT architecture for the organisation in such a way that the user, applications and databases can be integrated and network together, efficiently allocating information systems development and operational resource among competing applications and planning information project I order to complete on time and within budget (Ibid 2006).

Ishak & Alias (2005), developed ISP-IPTA framework for SISP in higher learning in Malaysia. The ISP-IPTA consists of four main phases. The first phase is entitled "The Initial Phase of SISP Planning Process in IHLs". The objective of this phase is to define the SISP scope and the implementation plan for the SISP project. The importance of this phase is to ensure justification for the project, to monitor the change management and project formal acceptance. This phase is the most critical phase because it addresses the main problems identified in the status study, namely lack of funding and expertise. Top management of the university and the Ministry of Higher Education must be convinced of the need for the SISP so that sufficient budget can be allocated. The team members must be properly trained in SISP-IPTA framework to enable them become project champions.

The second phase is the analysis of the university and ICT environments. The objectives of this phase are to assess how ICT is currently supporting the university value chain, to identify the strategic drivers and capacity for change and to identify ICT opportunities. This phase is important in identifying the strengths, weaknesses, opportunities and threats to the university and benchmark IS/IT status in the university.

The third phase is ICT strategy formulation. The objectives of this phase are to prioritise the university activities to be supported by ICT and identify the university's future portfolio of ICT applications, to identify the appropriate applications development strategy, to formulate the IS service quality management strategies, to define the ICT policies, and to identify the financing strategy as well as other strategies related to ICT management.

The objectives of the fourth phase are to draft the plan for change management, define project requirement, analyse cost and benefit, develop an action plan, obtain top management approval, review the SISP plan and manage the SISP implementation. Ishak & Alias 2005 note that an automated toolkit comprised of various SISP techniques and tools support the SISP formulation process. These include SWOT Analysis, Five Forces Model, CSF analysis, Value Chain Analysis, Application Portfolio Matrix and Internal Benchmarking.

In 2003, the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) developed a framework to guide the public sector to develop their ICT strategic plans. This framework consists of a framework that follows a set of standard steps grouped in four major steps: Analyse Business Environment, Analyse ICT environment, Develop ICT Strategy and the last stage is Develop Implementation Plan. This framework has been used in Shanghai key universities and a study by Lev 2010 was carried out to investigate the status, problems and benefits of



strategic information systems planning implementation in Shanghai key universities:

The research on the strategic IS planning methodologies shows that in practice organizations use broad spectrum of methodologies. Earl (1993) was interested in SIS planning practice and investigated the strategic IS planning practice of 27 U.K. organizations. He proposed both formal methods and principles of good practice. According to Lederer and Sethi (1996), the strategic IS planning can be defined as a process of identifying a portfolio of computer-based applications that will assist an organization in executing its business plans and realizing its business goals following one of several, similar well-defined methodologies.

Regardless of the methodology used, there must be some level of coordination between the business and the strategic IS planning. Earl (1993), Lederer & Sethi (1996), Luftman & Brier (1999), Pavri & Ang (1995), Teo, Ang, & Pavri (1997), Teo & King (1999), all found a significant positive relationship between the level of business and IS planning effectiveness. It appears that the strategic IS plans are increasingly modeled after the corporate plans, as more and more organizations seek to leverage the benefits of IT.

Vitale, et al as cited by Hsu & Pant (1995) classify SISP methodologies into impact and alignment where by impact methodologies help create and justify new uses of IT, while the methodologies in the alignment category align Information systems' objectives with organisational goals. Ishak & Alias (2005) say an SISP methodology is especially useful for the inexperienced SISP developer because it provides a systematic guideline to carry out the IS strategy formulation process.

The review of the benefits of the strategic IS planning reveals some interesting facts. Premkumar & King (1994) studied the benefits of the strategic IS planning on 249 organizations randomly chosen from The Corporate 1000, a directory of the 1000 largest manufacturing and service

companies in the USA. In their study major benefits were improved internal efficiency of operations, greater customer satisfaction, return on investment, larger market share and improved sales revenue. Earl (1993) investigated 21 U.K. organizations through field studies. The results showed that major benefits of the strategic IS planning in U.K. companies are aligning IS with business needs, top management support, better priority setting and competitive advantage applications. In Singapore, Teo, Ang and Pavri (1997) as well as Teo and King (1999) found that the benefits from the strategic IS planning were mainly internally focused since top three benefits were improved productivity, improved internal coordination and efficient and effective management of IS resources.

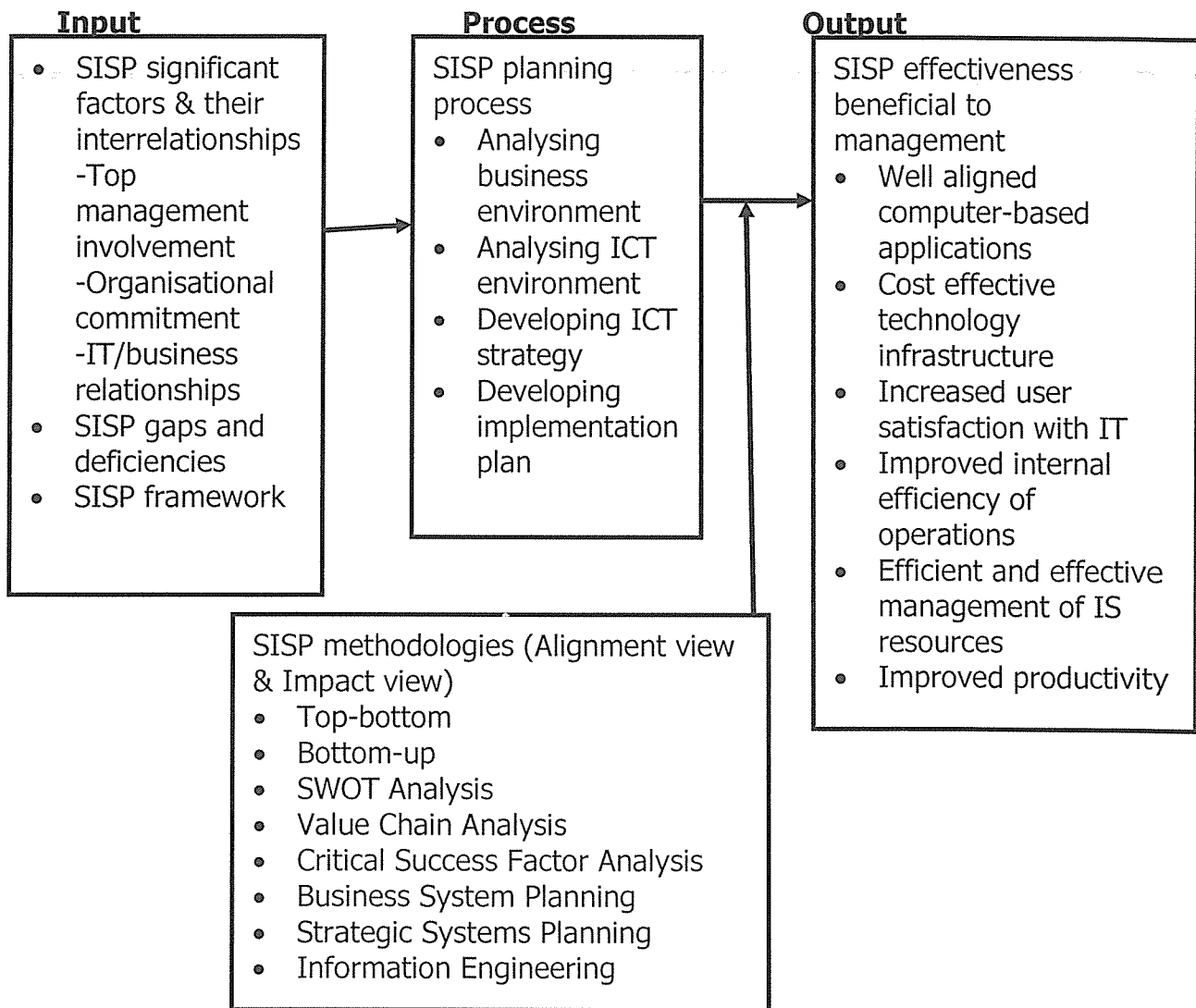
Groznik & Spremic (2006) carried out a study on strategic information system planning in Slovenia. The respondents were asked to rate the degree of benefits derived from the strategic IS planning process on a five-point scale. According to the results, the companies highly appreciate the benefits from the strategic IS planning process. In the study, the most important benefits revealed were improved internal coordination, efficient and effective management of IS resources and improved productivity.

### **Theoretical Perspective**

The conceptual framework is based on the Contingency model for estimating success of Strategic Information Systems Planning as advanced by Bechor et al (2009). This theory bases on the assumption that the success of SISP is as a function of its key success factors which is the SISP key factors and their interrelationships, the gaps ignored while doing SISP and employing a SISP framework that will enable the SISP process to succeed in different contexts of the planning process using different methodologies which in the end lead to the benefits of aligning the right IT/IS for the organization.

## **Conceptual Framework for SISP**

Strategic Information Systems Planning (SISP) significant factors and their interrelationships are the key factors that are critical for Strategic Information System Planning process to be successful. These are among others; top management involvement, organisational commitment and IT/business relationships. SISP gaps and deficiencies are those critical factors ignored during SISP planning. SISP framework is a clear model that has been developed to guide Strategic Information Systems Planning. Strategic Information Systems Planning is a process. SISP process entails analysing business environment, analysing ICT environment, developing ICT strategy and developing implementation plan. The SISP process is done in line with a specific SISP methodology. Impact methodologies help create and justify new uses of IT, while the methodologies in the alignment category align IS objectives with organisational goals. If the SISP process is done effectively using the right methodology, it will lead to the benefits of SISP which are good for the management of a University. These range from well aligned computer-based applications, cost effective technology infrastructure, increased user satisfaction with IT, improved internal efficiency of operations, efficient and effective management of IS resources to improved productivity. The conceptual framework is summarised in Figure 1.



**Figure 1: Contingency Model Bechor et al (2009).**

## Related Studies

This portion discusses past empirical investigations similar to or related to the study.

Lev (2010), carried out a case study on strategic information systems planning in Shanghai key universities in Yangpu District. He investigated the current status, problems and benefits of strategic information systems planning in those universities. He used the Malaysian Administrative Modernization and Management Planning Unit (MAMPU)

guidelines to establish the findings. Findings indicate that 3 of the 4 institutions had completed SISP implementation. His research did not look at the gaps during SISP.

Pollack (2010) presented a paper which examined the research on strategic information systems planning. Pollack concludes in his paper that:

*SISP success occurs when an organisation is able to achieve congruence between IS and organizational planning, and this is achieved when the technical and general managers of an organisation work collaboratively.*

Hovelja et al (2010) measured the success of the strategic information systems planning in enterprises in Slovenia. They found out that even though the literature lists plenty of SISP methods with clear theoretical merits, they find these methods too abstract and or too cumbersome to use in practice.

Bechor, et al (2009), did a research about a contingency model for estimating success of strategic information systems planning. The research investigated the success of SISP as a function of its key success factors in different components and SISP approaches, in a framework that integrated all of the SISP components and provided a new perspective on how the constructs are instrumental to produce SISP success.

Basahel & Irani (2009) carried out evaluation of strategic information systems planning techniques.

Abu Bakar, et al (2009) did about conceptualization of strategic information systems planning success model in public sector. They proposed a conceptual framework based on absorptive capacity model for an SISP success model in the public sector.

Selemat, et al (2006) carried out research about integrating strategic information security with strategic information systems planning. The study investigated the contribution of information security attributes

to the strategic information systems planning in an organization. The study also introduced a new model of SISP embedded with information security attributes.

Ishak & Alias (2005), carried research about designing a strategic information systems planning methodology for Malaysian Institutes of Higher Learning. After the research, he designed a framework which was appropriate for the organisational requirements for Malaysian Public Institutes of Higher Learning.

Palanisamy (2005) did research about strategic information systems planning model for building flexibility and success. The paper provides a model for IS planning for building flexibility and success by considering volatile and the possibilities for leveraging the user's cognitive capabilities. The findings validated this model. Also the study results showed that user expectations, perceived personal usefulness, and users' internal flexibility possesses a high driver power for user involvement.

Hsu (1995), reviewed literature for commonly used information systems planning methodologies and found out that a new approach is needed. He concluded that an integration of planning with development and management through enterprise information resources will shorten the response cycle and even allow for economic evaluation of information system investment.

Leder (1988) did research about the implementation of strategic information systems planning methodologies. The survey examined the problems faced by information systems managers when they attempt to implement SISP methodologies. Results suggest that the SISP methodologies may often produce satisfactory plans but that organizations lack the management commitment and control mechanisms to ensure that they follow the plans.

## **Conclusion**

From the literature review, it is clear that research on SISP has been done in America, Malaysia, China and Europe and the researcher found no trace of research on SISP in Africa and Uganda in particular. The research carried out on SISP was done in big organisations and top world universities and leaves no mention of small organisations and emerging universities which are having meager resources to heavily invest in IT/SISP as per the literature. The SISP frameworks the researcher found out are in America and Malaysia and the researcher did not find any SISP framework used in Ugandan universities.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Research Design**

The researcher employed descriptive and correlation research design with special attention to quantitative approaches. Descriptive design was used to establish the demographics of the respondents, the factors for effective strategic information systems planning and the gaps during strategic information systems planning. Descriptive correlational design was used to establish the relationship between strategic information systems planning and the management of Uganda martyrs university. Correlational research design establishes relationships between two variables and show predictions of a future event or outcome from a variable (Rippy, 2009).

#### **Research Population**

The target population of the study was Uganda Martyrs University which comprises of the University management, Deans, Heads of Departments, full time academic and administrative staff and student guild. These were chosen because they are assumed to be well acquainted with the day-to-day running of the university. There are 6 members of management, 8 Deans, 8 Heads of Department, 131 academic staff, 27 administrative staff and 10 Student Guild. This made a total population of 190.

#### ***Sample Size***

The Sloven's formula was used to determine the minimum sample size. A 95% confidence level and Margin of error = .05 are assumed for Equation:



$$n = \frac{N}{1 + N(e)^2}$$

Where n= the sample size

N= the target population

e = the margin of error

1 = the constant.

A sample size of 128 respondents was used from the target population of 190 people.

### ***Sampling Procedure***

Samples were selected and data collected from them and generalization on the whole population from which the sample were chosen was made.

Purposive random sampling was used for the selection of the university management, deans, heads of department, student guild and administrative staff to get the right respondents with the correct data required for the study. Stratified random sampling was used for the academic staff to cater for the differences in the ranks of the academic staff like Professor, Lecturer and Assistant Lecturer. Simple random selection was used in the selection of members of each stratum. This gave each member of the stratum an equal chance of being selected.

## **Research Instruments**

### ***Questionnaires***

Structured questionnaires were used and distributed to the Management, Deans, Heads of Department, administrators, Academic staff, and Student Guild. The questionnaire consisted of closed ended questions to get the respondent's views, opinions about the gaps and deficiencies of the Strategic Information Systems Planning in Uganda

Martyrs University and the significant factors and their interrelationships relevant to UMU for effective Strategic Information Systems Planning.

The questionnaire was based on the questionnaire previously developed by Conrath, Ang & Matthey (1992) and McLean & Soden (1977) on which necessary adaptation were made in accordance with the actual situations in Uganda Martyrs University. The model questionnaire was supplemented and successfully used in the study in Singapore by Pavri & Ang (1995) as well as by Teo, Ang & Pavri (1997). The questionnaire for formulating the SISP framework was used by (Lev 2010) using the MAMPU guidelines when he conducted a research on SISP in Shanghai key universities. The questions were modified to fit Uganda Martyrs University situation. This questionnaire was given after three different SISP frameworks were given to the Deputy Vice Chancellor Finance and Administration, the Head of ICT, the Head of Information Systems, One Administrator from the faculty of Business Administration as well as its Dean and an Assistant Registrar in charge of Admissions and Students' records. The questionnaire sought their views on which SISP framework is easy to use, can be easily understood, can bring out the desired output of SISP and if given an option to chose the framework for UMU which one would they opt for.

### ***Validity and Reliability of the Instrument***

Since the questionnaire had been used as a valid instrument in the previous research studies, there was no need to investigate its reliability and validity.

## **Data Gathering Procedures**

### ***Before the administration of the questionnaires***

1. An introduction letter was obtained from the School of Post Graduate Studies and Research for the researcher to solicit approval to conduct the study from Uganda Martyrs University
2. A formal request to collect data was given to the Director Human Resources, Uganda Martyrs University.
3. When approved, the researcher secured a list of the qualified respondents from the school authorities in charge and select through systematic random sampling from this list to arrive at the minimum sample size.
4. The respondents were explained about the study and an informal consent was obtained from each respondent.
5. Reproduced more than enough questionnaires for distribution.
6. Selected research assistants who assisted in the data collection; briefed and oriented them in order to be consistent in administering the questionnaires.

### ***During the administration of the questionnaires***

1. The respondents were requested to answer completely and not to leave any part of the questionnaires unanswered.
2. The researcher and assistants emphasized retrieval of the questionnaires within five days from the date of distribution.
3. On retrieval, all returned questionnaires checked if all are answered.

### ***After the administration of the questionnaires***

The data gathered was collated, encoded into the computer and statistically treated using the Statistical Package for Social Sciences (SPSS).

## Data Analysis

Quantitative data was collected through a structured questionnaire, coded and entered into Statistical Package for Social Scientists (SPSS version 16).

The frequency and percentage distribution were used to determine the demographic characteristics of the respondents.

The mean and standard deviations were applied for the significant factors and the gaps for Strategic Information Systems Planning.

The following mean ranges were used to arrive at the mean of the individual indicators and interpretation:

### *A. For the SISP significant factors*

Mean Range	Response Mode	Interpretation
3.26-4.00	Most important	Very satisfactory
2.51-3.25	Important	Satisfactory
1.76-2.50	Less important	Fair
1.00-1.75	Least important	Poor

### *B. For the SISP gaps*

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly Agree	Very wide gap
2.51-3.25	Agree	There is a gap
1.76-2.50	Disagree	No gap
1.00-1.75	Strongly Disagree	No gap at all

### *C. For the SISP tasks*

Mean Range	Response Mode	Interpretation
3.26-4.00	Very important	Very necessary
2.51-3.25	Important	Necessary
1.76-2.50	Less important	Can be left
1.00-1.75	Least important	Should be left

The Pearson correlation was utilized to test the relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University at 0.05 level of significance.

## **Ethical Considerations**

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

1. Sought permission to adopt the standardized questionnaire on strategic information systems planning and the management through a written communication to the author.
2. The respondents departments and job descriptions were coded instead of reflecting the names, gender and age.
3. Solicited permission through a written request to the Director Human Resources Uganda Martyrs University in the study.
4. Requested an informal consent from the respondents
5. Acknowledged the authors quoted in this study and the author of the standardized instrument through citations and referencing.
6. Present the findings in a generalized manner.

## **Limitations of the Study**

In view of the threats to validity, the researcher claimed an allowable 5% margin of error at 0.05 level of significance

1. *Extraneous variables* some key informants may not have revealed in detail the gaps that are affecting Strategic Information Systems Planning at Umu and as such, this may have affected the content validity of the third research question.
2. *Attrition/Mortality*: Not all questionnaires returned were completely answered due to circumstances on the part of the respondents such as travels, sickness, hospitalization and refusal/withdrawal to participate. In this case, the researcher reserved more respondents by exceeding the minimum sample size. The respondents were reminded not to leave any item in the questionnaires unanswered and were closely followed up as to the date of retrieval.

## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

#### **Introduction**

This chapter presents, analyses and interprets data Research Question by Research Question. Before the presentation, analysis and interpretation of data, the researcher presents statistics regarding the response rate.

#### **Response Rate of the Respondents**

A total of 180 questionnaires were administered and out of which 128 were returned representing a response rate of 71 percent. This meets the requirements of 54 percent or higher stipulated by Holbrook et al (2005) as being a more accurate representation. Therefore in this study, 128 questionnaires were analyzed and used to answer the research questions and test the hypothesis. Table 1 below shows the number of returned questionnaire from the various faculties and departments that were given the self administered questionnaire.

**Table 1A:  
Response rate**

	<b>Number</b>	<b>Percent (%)</b>
Total given out	180	100
Total returned	128	71

**Source: SPSS**

**Table 1B:  
Response rate per department**

Department/Faculty	Questionnaires given out	Questionnaires returned
Vice Chancellor	3	2
Finance	5	3
Accounts	5	2
Registry	6	5
Library	5	3
Procurement	2	1
ICT	5	3
Information Systems	1	1
Distance Learning Studies	2	1
Good Governance	15	10
Micro Finance	10	7
Estates	1	1
Agriculture	10	9
Health Science	15	12
Built Environment	10	6
Science	25	20
Business Administration and Management	15	13
Institute of Ethics and Development Studies	15	8
Humanities	10	4
Education	20	17
Total	180	128

**Source: Primary data (2012)**

### **Demographic characteristics of respondents**

This section presents the different categories of respondents. These are the Students Guild who are the students' leaders at the University. They are engaged in the today running management of students' fair at the University in liaison with the Office of the Dean of Students. The other category is that of Administrators. These are the Faculty, Institute or Department staffs who deal in administrative issues of the University. These are involved in the day to day running of the Faculties. The other category is that of Lecturers. These are further clustered into Professors, Lectures, Assistant Lectures and Assistant Librarian. These people are involved in the teaching and learning, research and outreach, the core objectives of the University. Management is the other category. Management are the top most University staff who are mandated by the

University Governing Council to carry out the day to day running of the University on their behalf. They include the Vice Chancellor, the Deputy Vice Chancellor Academics, the Deputy Vice Chancellor Finance and Administration, the Registrar, the Chief Finance Officer and the Dean of Students. The University to achieve its goals is enforced by Management who have powers entrusted to them by Uganda Martyrs University Charter and Statutes.

The purpose of this information is to help the readers in understanding the situation and bring on board the nature of people who either answered the questionnaire or were interviewed, which will help the reader to judge the authenticity of the findings.

This data was received from Section A of the Questionnaire (Appendix IV). Table 2 shows the frequencies of respondents and their corresponding percentages grouped into seven categories, namely: Students Guild, Administrators, Professors, Lectures, Assistant Lecturers, Assistant Librarians, and Management.

**Table 2:  
Categories of respondents**

<b>Category</b>	<b>Frequency</b>	<b>Percent (%)</b>
Students Guild	12	9.4
Administrators	23	18.0
Professor	3	2.3
Lecturer	74	57.8
Assistant Lecturer	12	9.4
Assistant Librarian	3	2.3
Management	1	.8
Total	128	100.0

**Source: Primary data (2012)**

From Table 2, Lectures constituted the greatest frequency (74), contributing more than a half (57.8 percent) of the respondents. Next to



the lecturers were administrators who constituted 18.0percent of the respondents. Students Guild and Assistant Lectures came up with the same frequency, each of these contributing 9.4 percent of the respondents. Professors and Assistant Librarians had the same frequency and each contributed 2.3 percent to the number of respondents. Management had the lowest frequency (only one person came from management, contributing 0.8 percent to the number of respondents)

### **The factors relevant to UMU for effective Strategic Information Systems Planning**

To solicit answers to this research question, Questions 2 and 3 from the self administered questionnaire were used. Descriptive statistics were calculated to look for the mean and the percentage for the different responses for questions in the questionnaire. These statistics helped to get an understanding of what factors are relevant for UMU to have an effective SISP. The findings are presented in Table 3a and 3b.

**Table 3a:**  
**Factors for successful strategic information systems planning**

n =128

<b>Factor</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
Anticipating likely changes in information	4.9828	Very important	1
Being able to obtain sufficient qualified personnel	4.9483	Very important	4
Deciding on appropriate planning horizon	4.9138	Very important	5
Getting top management support for the planning	4.9828	Very important	1

**Source: Primary data (2012)**

**Table 3b:**  
**Factors for successful strategic information systems planning**

n =128

Having a clear cut corporate plan	4.9655	Very important	3
Having a clear, concise, formal, planning	4.8448	Very important	6
Having free communication and commitment to change	3.9828	Very important	9
Having good IT/ business relationships	4.1897	Very important	7
Having good user-information system relations	4.1207	Very important	8
Having organizational commitment	3.9138	Very important	12
Investing sufficient 'front end' time	3.9649	Very important	10
Taking into account the politics side of SISP.	3.9483	Very important	11

**Source: Primary data (2012)**

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
3.26-4.00	Very important	Very necessary
2.51-3.25	Important	Necessary
1.76-2.50	Less important	Can be left
1.00-1.75	Least important	Should be left

Generally from Table 3a and 3b, all the factors were weighed very important. This means that all the factors are very necessary to have an effective strategic information systems plan. In terms of ranking, anticipating likely changes in information and getting top management support for the planning rank number one. Having a clear cut corporate plan ranked third. Being able to obtain sufficient qualified personnel ranked fourth, deciding on appropriate planning horizon ranked fifth, having a clear, concise, formal, planning ranked sixth, having good IT/ business relationships ranked seventh, having good user-information

system relations ranked eight, having free communication and commitment to change ranked ninth, investing sufficient 'front end' time ranked tenth, taking into account the politics side of SISP ranked eleventh and having organizational commitment ranked twelfth.

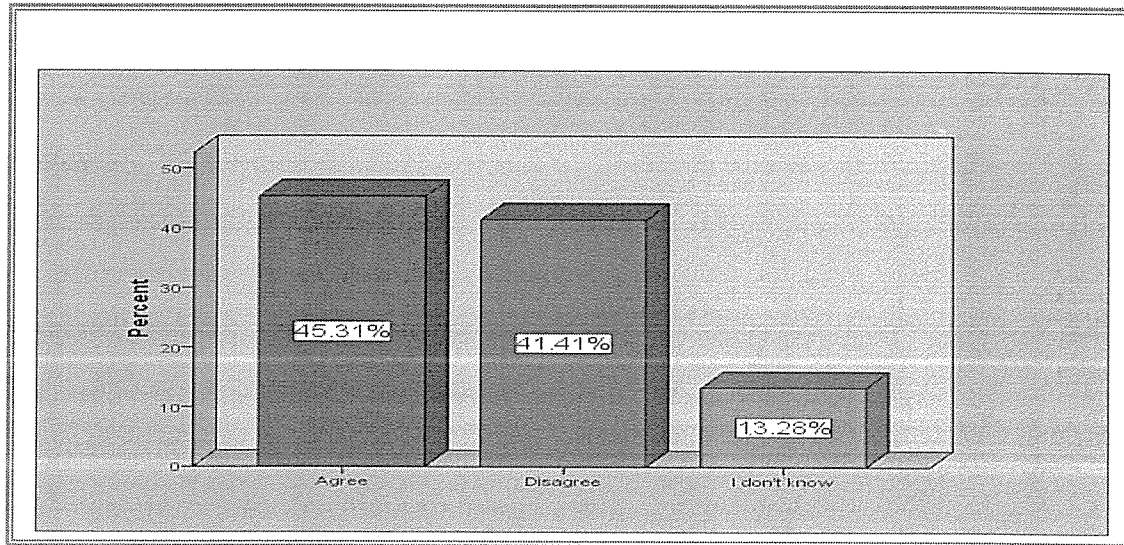
The ranking of the factors above is according to the order of importance and significance. This means that these factors are relevant to UMU for effective implementation of Strategic Information Systems Planning.

The results agree with the earlier researches done by Eral (1993), Teo, Ang & Pavri (1997), Teo & King (1999), Groznik & Spremic (2006) about the Critical Success Factors for effective implementation of SISP in any organisation. Their research put top management involvement and support at the helm of the factors as this research has found out.

The finding above are also in agreement with the research done by Pollack (2010) who says that the critical success factors for SISP are interrelated in one way or another and in carrying out SISP, it should be a collaborative planning challenge of parties involved like the top managers, business unit managers, technology and systems professionals and sometimes external stakeholders to cater for the CSFs because they affect the successful implementation of SISP in an organisation.

The respondents were then asked whether they agree, disagree or if they didn't know whether the absence or failure of one of the above critical factors would make the Strategic Information Systems planning process not effective. Varied responses were given; and these responses have been summarised in Figure 2.

**Figure 2:**  
**Proportion of respondents on seriousness of factors**



**Source: Primary data (2012)**

According to Figure 2 above, a higher percentage (45.31percent) compared to (41.41percent) was in agreement that the absence or failure of one of the above critical factors would make the Strategic Information Systems planning process not effective. This is in agreement with the findings from the percentage frequencies on the most important and important factors (Table 3).

This finding is in tandem with Leder and Sethi (1996) who say that to have an effective IS plan is far from easy because it is not easy to tell the effect an omission of one of the CSFs will have on the successful implementation of SISP.

### **The gaps during Strategic Information Systems Planning at Uganda Martyrs University**

To identify the gaps and deficiencies of Strategic Information Systems Planning at Uganda Martyrs University (UMU), questions in section C of the self administered questionnaire were used. The gaps and

deficiencies for the SISP at UMU were identified by descriptive statistics challenging the current practice in the SISP at UMU with concepts and recommendations from literature and the propositions of the respondents that participated in the research study. The results from the respondents shown in table 4.

**Table 4:**  
**Gaps during Strategic Information Systems Planning**

n =128

Gap	Mean	Interpretation	Rank
Bottom up methodology used in Strategic Information Systems Planning in the faculty/department	3.8333	Very wide gap	1
Only ICT people responsible for the Strategic Information Systems Planning at UMU	3.0000	There is a gap	2
Strategic Information System plan not aligned after the corporate plan of the university/faculty/department?	2.0000	No gap	3
Do not participate in the strategic plan	2.0000	No gap	3
Do not usually have Strategic Information Systems Planning during strategic planning	1.8333	No gap at all	4

**Source: Primary data (2012)**

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly Agree	Very wide gap
2.51-3.25	Agree	There is a gap
1.76-2.50	Disagree	No gap
1.00-1.75	Strongly Disagree	No gap at all

From table 4, there is a very wide gap in the methodology used in SISP planning. The bottom up methodology is highly used. There is also a gap in terms of the people responsible for strategic information systems planning. The ICT personnel are the main people responsible for strategic information systems planning. There is no gap in as far as the SISP plan being aligned to the corporate plan, individuals participating in SISP and having SISP during the strategic planning.

The results are in agreement with Pollack (2010) who asserts that Strategic Information Systems Planning was previously the work of

technology and systems professionals but now has changed to be a collaborative planning challenge of parties including top managers, business unit managers, technology and systems professionals, and sometimes external stakeholders.

### **The different tasks necessary for Strategic Information System Planning in Uganda Martyrs University**

To come up with the tasks for a suitable framework for effective Strategic Planning, the researcher made three different frameworks from different authors and availed copies to the ICT Head of Department, the Information Systems Head of Department, the Administrator in the Faculty of Business Administration as well as its Dean and the Chairperson Planning Committee of the University. These people were chosen because from the interviews conducted with the Chairperson Planning Committee; the Deans, The ICT Head of Department, the Faculty Administrators as well as the Planning Department should be responsible for Strategic Information Systems Planning at Uganda Martyrs University.

The frameworks that were given are: The Malaysian Administrative Modernization and Management Planning Unit (MAMPU) 2003 framework, the ISP-IPTA framework for Higher Learning in Malaysia developed by Ishak and Alias 2005 and the Cassidy Anita 2006 framework.

After two months, the selected people were individually given a questionnaire regarding the different tasks for an effective Strategic Information Systems Plan to find out if they have been using the different tasks in Uganda Martyrs University Strategic Information Systems Planning. The framework adopts a four-stage approach that answers the why, what, how and when questions for each activity of the formulation of an Information Systems Strategic Plan.

The four implementation stages are:

1. Analysis of university environment

2. Analysis of IT/IS environment

3. Development of IT/IS strategy

4. Development of implementation plan.

Each stage consists of several phases, which also comprise of several tasks. The results are shown in table 5a, 5b and 5c.

**Table 5a:**  
**Tasks for successful strategic information systems planning**

n =128

Task	Mean	Interpretation	Rank
<b>Analysis of University environment</b>			
Understand background of Uganda Martyrs University(UMU)	1.1429	Poorly implemented	2
Understand UMU vision and mission	1.0000	Poorly implemented	6
Understand UMU corporate strategy	1.0000	Poorly implemented	6
Review current issues and chances	1.1429	Poorly implemented	2
Develop first cut vision of opportunities and directions	1.5000	Poorly implemented	1
Do SWOT analysis	1.0000	Poorly implemented	6
Understand current business trends	1.1429	Poorly implemented	2
Identify immediate IT implication	1.1429	Poorly implemented	2

**Source: Primary data (2012)**

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly Agree	Very satisfactory implemented
2.51-3.25	Agree	Satisfactory implemented
1.76-2.50	Disagree	Fair implemented
1.00-1.75	Strongly Disagree	Poor implemented

From table 5a, all the tasks are poorly implemented by Uganda Martyrs University. The findings rank developing first cut vision of opportunities as number one, understanding current business trends, identifying immediate IT implications, Understanding background of Uganda Martyrs University and Reviewing current issues and chances as second. Understanding UMU vision and mission, Understand UMU corporate strategy and Doing a SWOT analysis are ranked sixth. This means that the least ranked is the least implemented task.

The findings for the SISP tasks agree with the MAMPU (2003) framework contents of the first stage of SISP which is Analyse Business Environment. The first stage according to MAMPU, *ibid* should analyze organisation main functions, business issues, opportunities and outcomes.

The findings are in tandem with Lev(2010) research findings where by the respondents perceived understanding background of agency, agency vision and mission, corporate strategy, reviewing current issues and chances, developing first cut vision of opportunities and directions, determining agency value-chain and understanding current business trends as being important.



**Table 5b:****Tasks for successful strategic information systems planning**

n =128

<b>Tasks in analysis of IT Environment</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
Review current IT strategy, plans and budget	1.0000	Poorly implemented	6
Review high level current IT environment	1.1429	Poorly implemented	1
Assess IT organisation and management	1.0000	Poorly implemented	6
Assess applications and data	1.1429	Poorly implemented	1
Assess technology and infrastructure	1.0000	Poorly implemented	6
Assess service delivery	1.2857	Poorly implemented	5
Assess strategic impact	1.1429	Poorly implemented	1
Consolidate findings	1.2857	Poorly implemented	5
Identify short term IT improvement projects	1.1429	Poorly implemented	1

**Source: Primary data (2012)**

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
3.26-4.00	Strongly Agree	Very satisfactory implemented
2.51-3.25	Agree	Satisfactory implemented
1.76-2.50	Disagree	Fair implemented
1.00-1.75	Strongly Disagree	Poorly implemented

From table 5b, all the tasks in the analysis of the IT environment are poorly implemented. The ranks reveal that reviewing high level current IT environments, assessing applications and data and identifying short term IT improvement projects rank number one. Assessing service delivery and consolidating findings rank number five. Mean while reviewing current IT strategy, plans and budget, assessing IT organisation and management, assessing technology and infrastructure rank number six. This means that that is the order of importance of those tasks in this phase.

**Table 5c:****Tasks for successful strategic information systems planning**

n =128

<b>Tasks in Development of IT/IS strategy</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
Identify major IT opportunities	1.1429	Poorly implemented	2
Determine the benefits of IT opportunities	1.0000	Poorly implemented	8
Determine risks of IT opportunities	1.1429	Poorly implemented	2
Develop initial target applications	4.0000	Satisfactorily implemented	1
Build target applications	1.1429	Poorly implemented	2
Prioritize target applications	1.1429	Poorly implemented	2
Confirm target applications to management	1.1429	Poorly implemented	2
Identify technology trends	1.1429	Poorly implemented	2
Define principles for technology strategies	1.0000	Poorly implemented	9
Determine technology requirements	1.0000	Poorly implemented	9
Determine technology architecture	1.0000	Poorly implemented	9
Formulate technology strategy	1.0000	Poorly implemented	9
Revisit IT organisation and management issues	1.0000	Poorly implemented	9
Identify IT service and skills required	1.0000	Poorly implemented	9
Develop IT governance framework	1.1429	Poorly implemented	2

**Source: Primary data (2012)**

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
3.26-4.00	Strongly Agree	Very satisfactory implemented
2.51-3.25	Agree	Satisfactory implemented
1.76-2.50	Disagree	Fair implemented
1.00-1.75	Strongly Disagree	Poor implemented

From table 5c, its only the task of developing initial target applications that is satisfactorily implemented. The rest of the tasks in the

development of IT/IS strategy are poorly implemented. The ranks show that much as most of the tasks are poorly implemented, the order of importance differs.

The findings also agree with Lev (ibid) findings that all tasks in this stage are very important in order to have an effective SISP.

**Table 5d:**  
**Tasks for successful strategic information systems planning**

n =128

Tasks in implementation plan	Mean	Interpretation	Rank
Develop and rank projects	1.0000	Poorly implemented	2
Prepare for transition strategy	1.2857	Poorly implemented	1
Formulate implementation strategy	1.0000	Poorly implemented	2
Estimate project costing	1.0000	Poorly implemented	2
Source of funds	1.0000	Poorly implemented	2

**Source: Primary data (2012)**

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly Agree	Very satisfactory implemented
2.51-3.25	Agree	Satisfactory implemented
1.76-2.50	Disagree	Fair implemented
1.00-1.75	Strongly Disagree	Poor implemented

From Table 5d, all the tasks in the implementation plan are poorly implemented. In terms of ranking, preparing for transition strategy is ranked number one. Developing and ranking projects, formulating implementation strategy, estimating project costs and sourcing for funds are all ranked second. This means that that they are ranked according to the order of importance.

The findings also agree with Lev, ibid, research where all tasks in this stage were perceived as being important.

**Table 6**  
**Relationship between strategic information systems planning and  
the management of Uganda Martyrs University**

<b>Variables correlated</b>	<b>Computed r-value</b>	<b>P-value</b>	<b>Interpretation of correlation</b>	<b>Decision on H0</b>
Strategic Information Systems Planning Vs Level of management of Uganda Martyrs University	0. .846	0.000	Significant	Reject

P<.05=significant, r=0.846 positive correlation

**Source: Primary data (2012).**

Table 6 indicated that there is a significant relationship between strategic information systems planning and the management of Uganda Martyrs University. The positive correlation implies that an increase in effective SISP mean an increase in better management of Uganda Martyrs University.

**Table 7**  
**Regression analysis between Dependent and Independent variables**

<b>Variables regressed</b>	<b>Computed F-value</b>	<b>R<sup>2</sup></b>	<b>P-Value</b>	<b>Interpretation of correlation</b>	<b>Decision on H0</b>
Level of UMU management v Strategic Information systems	0.038	0.000 <sup>a</sup>	0.000	Significant	Reject

**P<.05=significant effect, F=0.038**

**Source: Primary data (2012)**

Table 7 shows that there is a significant effect between Dependent and Independent variables, which means that strategic information systems planning does predict the level of management in Uganda Martyrs University.

## **CHAPTER FIVE**

### **FINDINGS, CONCLUSIONS, RECOMMENDATIONS**

#### **FINDINGS**

The following are the key findings of this study:

1. Lecturers are the majority followed by administrators in the service of Uganda Martyrs University management. The students' guild follow and the least are members of management.
2. There are significant factors necessary for an effective Strategic Information Systems Planning. All these factors are very necessary to have an effective Strategic Information Systems Plan and ranked according to order of importance. An absence or neglect of one or more of these factors will have an effect on strategic information systems planning.
3. Uganda Martyrs University uses bottom up methodology for Strategic Information Systems Planning (SISP) and this is the widest gap identified in the study followed by the ICT personnel as the main people responsible for SISP.
4. Most of the tasks used in Strategic Information Systems Planning at Uganda Martyrs University are poorly implemented.
5. There is a significant relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University.
6. Strategic Information Systems Planning can predict the level of management in Uganda martyrs University.

#### **CONCLUSIONS**

The following are the conclusions of the study:

1. Strategic Information Systems Planning can cause an effect in the management of Uganda Martyrs University.

2. The relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University is positive.
3. There is a significant relationship between Strategic Information Systems Planning and the management of Uganda Martyrs University.
4. Strategic Information Systems Planning predicts the management of Uganda Martyrs University.
5. The study confirms the theory advanced by Bechor et al (2009) that the success of SISP is as a function of its key success factors which is the SISP key factors and their interrelationships, the gaps ignored while doing SISP and employing a SISP framework that will enable the SISP process to succeed in different contexts of the planning process using different methodologies which in the end lead to the benefits of aligning the right IT/IS for the organization and consequently its management.

### **RECOMMENDATIONS**

1. Uganda Martyrs University (UMU) should effectively use the critical success factors to achieve an effective Strategic Information Systems Planning process. Top management should take a lead in Strategic Information Systems Planning and employ the qualified personnel in the Information and Communication (ICT) Department to facilitate an effective Strategic Information Systems Planning.
2. Uganda Martyrs University should fill the gaps and deficiencies during Strategic Information Systems Planning by:
3. Uganda Martyrs University should make faculties and departments participate in Strategic Information Systems Planning during Strategic Planning.
4. Uganda Martyrs University should keep on aligning the Information Systems Plan with the University Strategic Plan

5. Uganda Martyrs University should use the Top-down approach for Strategic Information Systems Planning instead of the bottom up methodology.
6. Uganda Martyrs University should satisfactorily implement the different tasks of Strategic Information Systems Planning to enhance its Information Systems planning for better management of the University.

### **Areas of further research**

The researcher did not find out the extend to which the gaps and deficiencies affect the SISP process. This should be investigated further.

The researcher found out a significant relationship between the Critical Success Factors but did not go further to investigate the effect of the relationship on SISP.



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## APPENDIX I

### TRANSMITAL LETTER



Ggaba Road - Kansanga  
P.O. Box 20000, Kampala, Uganda  
Tel: +256- 41- 266813 / +256- 41-267634  
Fax: +256- 41- 501974  
E- mail: admin@kiu.ac.ug,  
Website: www.kiu.ac.ug

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#### OFFICE OF THE COORDINATOR, BUSINESS AND MANAGEMENT SCHOOL OF POSTGRADUATE STUDIES AND RESEARCH (SPGSR)

August 17, 2011

Dear Sir/Madam,

**RE: REQUEST FOR KULE ABRAHAM MBA/42539/92/DU  
TO CONDUCT RESEARCH IN YOUR ORGANIZATION**

The above mentioned is a bonafide student of Kampala International University pursuing a Masters of Business Administration (Information Technology).

He is currently conducting a field research of which the title is "**Strategic Information Systems Planning Effectiveness in Uganda Martyrs University.**"

Your organization has been identified as a valuable source of information pertaining to his research project. The purpose of this letter is to request you to avail him with the pertinent information he may need.

Any information shared with him from your organization shall be treated with utmost confidentiality.

Any assistance rendered to him will be highly appreciated.

Yours truly,

Mr. Malinga Ramadhan  
**Coordinator**  
**Business and Management, (SPGSR)**

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*"Exploring the Heights"*

## APPENDIX II INFORMED CONSENT

Uganda  
Martyrs  
University

making a difference



Office of the Director- Human Resources

Your ref.  
Our ref.: Staff / Abraham Kule/ September 2011

Nkozi, 5<sup>th</sup> September 2011

Mr. Kule Abraham,  
Kampala International University,  
P.O.Box 20000,  
Kampala.

Dear Mr. Kule,

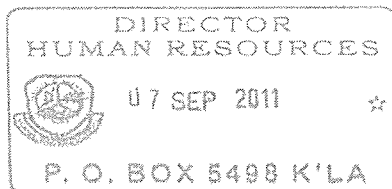
**Re: Permission to conduct an education research at Uganda Martyrs University**

I am in receipt of your letter dated 26<sup>th</sup> August 2011, on the above subject. You requested to conduct research as a partial requirement for the award of the degree of Master of Business Administration in Information Technology of Kampala International University. You are therefore given permission to conduct the research.

I wish you success in your data collection and hoping that your research will help the University in the field of Strategic Information Systems Planning Effectiveness.

Yours sincerely,

  
Euzebio A. Katorodogo  
Director, Human Resources



cc. DVC, AA

### APPENDIX III

#### CALCULATION OF THE SAMPLE

##### Sample Size

Using the Solve's formulae, A 95% confidence level and Precision(P) = .05 are assumed for Equation

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision. When this formula is applied to the population of 105 people, the sample size is thus calculated:

$$n = \frac{190}{1 + 190(0.05)^2}$$

$$1 + 190(0.05)^2$$

$$n = \frac{190}{1 + 190(0.0025)}$$

$$1 + 190(0.0025)$$

$$n = \frac{190}{1 + 0.475}$$

$$1 + 0.475$$

$$n = \frac{190}{1.475}$$

$$1.475$$

$$n = 128$$

Therefore the sample size for 190 target population is 128.

## APPENDIX IV

### RESEARCH INSTRUMENT

#### Questionnaire

##### Section A: Background information.

Please provide the following information for purposes of classifying the data.

1. Please indicate under which faculty or department you belong

Department/Faculty	Indicate with a tick here where you belong
Vice Chancellor	
Finance	
Accounts	
Registry	
Procurement	
ICT	
Information Systems	
Distance Learning	
Good Governance	
Micro Finance	
Estates	
Education	
Agriculture	
Health Science	
Architecture	
Science	
BAM	
IEDS	
Humanities	

2. Please indicate under which category you belong.

Category	Place your tick here		
Student			
Administrator			
Lecturer( indicate at what level)	Prof.	Lecturer	Asst. Lecturer
Management			

##### Section B: Establishing factors relevant for strategic information systems planning at UMU

2. Please weight (5 = most important, 1 = least important) the importance of the crucial factors for success of the Strategic IS Plan.

CHALLENGES/Crucial factors	5	4	3	2	1
Getting top management support for the planning efforts					
Having a clear-cut corporate plan to guide IS planning efforts					
Having organizational commitment					
Having good IT/business relationships					
Having good user-IS relationships					
Being able to obtain sufficient qualified personnel to do a proper job					
Anticipating likely changes in information technology (and environmental changes) which might affect the strategic IS					



planning process					
Having a clear, concise, formal, planning procedure					
Having free communication and commitment to change through the organization					
Investing sufficient 'front end' time to ensure that all planning tasks and individual responsibilities are well understood					
Deciding on an appropriate planning horizon					
Taking into account the people and politics side of strategic IS planning system					

3. Do you agree that the absence or failure of one of the above critical factors will make the SISP process not be effective?
- Agree
  - Disagree
  - I don't know

**Section C: Identifying the gaps and deficiencies of Strategic Information Systems Planning at Uganda Martyrs University (UMU).**

4. Does your department/faculty participate in strategic planning for the university?
- Yes continue with the rest of the questionnaire
  - No please return the questionnaire
5. How do you participate in the strategic plan? Please tick one option
- Bottom-up (The dept/faculty identifies the major decision areas, management and/or operational system needs, possible information gaps and operating inefficiencies that would be improved with information development efforts)
  - Top-down (Management identifies projects to be developed by examining the existing organization's business plans for potential support requirements)
  - Combination of both
  - Others (Please specify)
6. During the strategic planning process of your department, do you usually consider the Strategic Information System Planning (SISP)? **NB. SISP is the process of identifying a portfolio of computer-based applications that will assist an organisation in executing its business plans and realising its business goals.**
- Agree ☐ Disagree ☐
- If you answered disagree, is your department/faculty having an independent SISP?
- Agree ☐ Disagree ☐ I don't know ☐
7. Which people are responsible for the Strategic Information Systems Planning at UMU?

- ☐ The management
  - ☐ Deans/Directors/Heads of Department
  - ☐ ICT dept
  - ☐ Information Systems dept
  - ☐ System Engineers
  - ☐ All of the above
  - ☐ Others (Please specify)
8. Which planning methodology is used in strategic Information System planning in your faculty/department? (tick one)
- ☐ Bottom-up (ICT system analyst interview users to identify the major decision areas, management and/or operational system needs, possible information gaps and operating inefficiencies that would be improved with information development efforts)
  - ☐ Top-down (ICT department identifies projects to be developed by examining the existing organization's business plans for potential support requirements)
  - ☐ Combination of both
  - ☐ Others (Please specify)
  - ☐ I don't know
9. Is the strategic Information System (IS) plan modeled after the corporate plan of your university/faculty/department?
- ☐ Agree
  - ☐ Disagree
  - ☐ I don't know

**Section D: The different tasks for Strategic Information Systems Planning (For Key informants only)**

10. For this section, place a tick for how you perceive the tasks implementation in Strategic Information System Planning at UMU.

Criteria: 1=Very satisfactorily implemented; 2=Implemented; 3=Not implemented

<b>A. Analysis of University Environment</b>		Tick one alternative here		
Criteria		1	2	3
<i>Phase 1: Develop UMU overview</i>				
T1. Understand background of UMU				
T2. Understand UMU vision and mission				
<i>Phase 2: Review of current UMU environment</i>				
T3. Understand UMU corporate strategy				
T4. Review current issues and chances				
T5. Develop first cut vision of opportunities & directions				
T6. Do SWOT analysis				
<i>Phase 3: Identify areas of potential strategic advantage</i>				
T7. Understand current business trends				
T8. Identify immediate IT implication				
<b>NB. 1: Very important; 2: Important; 3: Not important</b>				
<b>B. Analysis of IT environment</b>		Tick one alternative here		
Criteria		1	2	3
<i>Phase 1: Perform IT assessment</i>				
T9. Review current IT strategy, plans & budget				

## RESEARCHER'S CURRICULUM VITAE

### Personal Profile

**Name:** Abraham Kule  
**Gender:** Male  
**Nationality:** Ugandan



### Educational Background

Master of Business Administration-IT (K.I.U)	(Candidate)
B.A (SPS) (MAK)	(2003)
UACE (St. Mary's Seminary)	(1999)
UCE (St. John's Seminary)	(1996)

### Work Experience

5 years Editor, Uganda Martyrs University  
2 Executive Secretary, Rwenzori Action for Life Improvement

### Awards

- Southern Junior Researchers' Award 2009 by IDRC. Available at <http://ict4dgrants.org/>
- VLIR-UOS awards scholarships for International Training Programmes in Audio Visual Learning Materials (AVLM) – Production and Management at Katholieke Universiteit Leuven. 8<sup>th</sup> May to July 2<sup>nd</sup> 2008.

**I, Abraham Kule** confirm that the content of this CV is correct as of 2012.