

The Islami Information Technology Strategic Planning Model

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Abstract

This study's main objective is to develop a strategic planning model in Islami's information technology field. This objective is based on the study results that public organizations lack a strategic planning process and still experience a high percentage of failures. This failure was due to a lack of attention to human and organizational social factors in the strategic planning process. The study method is mix-method by a research and development approach. Source of data is primer. The data collection technique used a survey and focus group discussion. The instrument is researchers themselves and questionnaire. The stages of the study include literature review, analysis of the ITSP model, design of the ITSP model draft, FGD group discussion and revision of the information ITSP model draft, and testing and approval of the ITSP model. Data analysis using qualitative and quantitative analysis approaches. The finding is that people involved in Islamic universities are more respectful of more Islamic statements and promote Islamic values. The development results of the model consists are five stages, namely developing ideas, determining the direction, assessment and analysis, determining strategic decisions, and implementation plan. Each stage is controlled by Islamic principles and values.

Keywords: *model, information technology, strategic planning, islamic principles and values.*

Tujuan utama penelitian ini adalah untuk mengembangkan model perencanaan strategik di bidang teknologi informasi yang mengedepankan prinsip dan nilai-nilai Islam dalam prosesnya. Tujuan ini didasarkan pada hasil studi bahwa organisasi publik kurang memiliki proses perencanaan strategik dalam bidang teknologi informasi dan dilaporkan masih mengalami persentase kegagalan yang tinggi. Kegagalan ini disebabkan kurangnya perhatian pada faktor sosial manusia dan organisasi dalam proses perencanaan strategik. Metode penelitian yang digunakan adalah metode campuran dengan pendekatan penelitian dan pengembangan. Sumber data adalah primer. Teknik pengumpulan data menggunakan survei dan focus group discussion. Instrumennya adalah peneliti sendiri dan angket. Tahapan penelitian meliputi tinjauan pustaka, analisis model perencanaan strategik teknologi informasi, perancangan draf model perencanaan strategik teknologi informasi, focus group discussion dan revisi draf model perencanaan strategik teknologi informasi, dan pengujian dan persetujuan model perencanaan strategik teknologi informasi. Analisis data menggunakan pendekatan analisis kualitatif dan kuantitatif. Temuan kajian yaitu bahwa orang-orang yang terlibat di universitas Islam lebih mengapresiasi pernyataan Islam dan mengedepankan prinsip dan nilai-nilai Islam. Hasil pengembangan model terdiri dari lima tahap yaitu pengembangan ide, penentuan arah, penilaian dan analisis, penentuan keputusan strategis, dan rencana implementasi. Masing-masing tahapan dikontrol oleh prinsip dan nilai Islam.

Kata Kunci: *model, teknologi informasi, perencanaan strategik, prinsip dan nilai Islam.*

1. INTRODUCTION

Based on the study results, the Information Technology (IT) implementation has the percentage of failure level still high (Dwivedi et al., 2015; Ebad, 2018; Fenech & Raffaele, 2013; Indrajit, 2017). The results of previous studies indicate that IT implementation in both corporate and public organizations due to the lack of a strategic planning process (Hackney & McBridge, 2002). The implementation of strategic IS has not been an adequate connection between IT and business (Almalki & Zafar, 2017). The primary reason for this failure is human and social factors in the organization (Lee & Bai, 2003). The other factors are social and organizational, including the

enterprise system, user resistance, and project management (Dwivedi et al., 2015). Referring to Sweis (2017), three factors fail IT implementation: delayed changes in the design stage, customization of high degree, and underestimating the timeline. It is believed that IT implementation failures originate from managerial and technical factors (McNamus & Wood-Harper, 2007). Define of IT implementation failure is "either the implemented system not meeting the user expectations or inability of creating working or a functioning system" (Ewusi-Mensah, 2003).

Other studies reported that the organization's human and social elements are a significant contribution to the success or failure of the IT implementation (Lee & Bai, 2003). According to Fenech & Raffaele (2013), the lack of direction and planning, implementation management, and user management are contributions to failure. Whereas, according to Ebad (2018), factors causing failure include lack of planning, rejection of change, lack of understanding required by users, government regulations, weak realignment of business processes, and training. Besides, referring to Kurti et al. (2013), the IT implementation's critical success factors successfully include the human dimension, social dimension, and intellectual dimension. To be able to implement IT successfully, an appropriate approach to the organizational environment is needed. There is no universal Information Technology Strategic Planning (ITSP) model for all forms of organizations, and the ITSP model exists as merely an approach (Malik, 2003). More attention needs to be paid to the condition of the people during the IT implementation, included: social system, political system, cultural, organizational system, and background of the organization (IDB, 2003).

The basic concept of ITSP is the strategic planning concept. Strategic planning is a systematic effort and steps to decide to achieve direction in the future Bryson (2004). The ITSP is a process of aligning IT with business objectives in order to make organizations more effective (Malik, 2003a), planning activity to ensure that the IT implementation is aligned with business strategies and simultaneously improves organizational processes, creates new business opportunities, and makes the organization competitive (IDB (IDB, 2003). Thus, ITSP is a process of determining the direction of IT utilization in line with the organization's business interests.

The ITSP provides a systematic guideline in doing IT strategies formulating processes (Maltz et al., 2005). The plan gives a guide to the organization in the form of overall IT strategy (Rouse, 2016), helps the business to succeed, a blueprint of the business implement strategies, the business value of an organization to get a competitive advantage enables an organization using IT to be more competitive, to identify costs and benefits, and to estimate the required IT needs (Silva et al., 2013). Thus, the ITSP process is essential before the IT implementation. ITSP is not a new problem. However, not all organizations already have and understand the importance of ITSP. Therefore, there needs to be a model as a guide for IT planners. Several ITSP models for public organizations (Silva et al., 2013; MAMPU, 2003; Titthasiri, 2000, for business organizations (Boar, 2001; Microsoft, 2011; Ward & Peppard, 2002). However, these models are not yet in harmony with the background of Islamic-based organizations. Besides, it has not included Islamic principles and values in the ITSP process.

In the context of Islam and Sufism, strategic planning means intention, which is not a new matter in Islam. It has manifested together with the manifestation of the Earth and Islamic civilization (Fadillah, 2006). Additionally, it is mentioned in several verses of the Qur'an (QS al-Baqarah:30; ar-Ra'd:2; Shad:27; adh-Dhariyat:56; al-Hasyr:18), which proves that Allah SWT is the grandest planner (Ismail, 2000). The Prophet and his companies' *Hijra* also established strategic planning (Al-Qardhawy, 1999; Al-Qardhawy, 2003; Azman, 2003). Therefore, even though it is not explicitly mentioned in Islam, it is derived from Islam, which is then studied and developed by the West (Mohd. Sharifudin, 2004). Islamic values are the foundation of the strategic planning, including: monotheism (Ismail, 2000; Wan Liz, 1996; QS al-Baqarah:21,22,255), discussion/*syuura* (Al-Munawar, 2004; Naceur, 1994; QS Ali- Imran:159; Asy-Syura:38), welfare/*mashlahah* (Ismail, 2000; Azman, 2003; Madjid, 2000; Tahia, 2002; QS al-Maa'idah:8; an-Nahl:90; an-Nisaa':58), justice/*adl'* (QS an-Nisaa':58; al-Maa'idah:8; an-Nahl:90), responsibility/*mas'uliyah* and balance/*tawazun* (QS Anhl:25; al-An'am:169, al-Mudatsir:38, Yasin:12), prioritization/*aulawiyah*

(QS al-Baqarah:219; an-Nur:35; Muhammad:19), gradualness/*tadaruu* (An-Nabhani, 2006; Djamil, 1997; QS al-Maa'dah:90-91; an-Nisaa':43), success/al-falah (Ismail, 2000; Wan Liz, 1996; Al-Munawar, 2004; Naceur, 1994; Mohd. Affandi, 1990), trustworthiness (Mohd. Shahr, 1991; QS an-Nisaa':58; al-Anfaal:27; al-Ahzab:72), surrender/*tawakal* (QS al-Maa'idah:58; Yunus:84; al-Hasyr:18; Ali-Imran:159; al-Kahfi:23).

This study's main objective is to develop a strategic planning model in Islami's information technology field. The Islami mean in line with Islamic principles and values. This model is essential because IT implementation is not only about technology. However, IT implementation is directly related to human life, organizational culture, the system changes impact, and benefits/*mashlahah*. Therefore, IT implementation needs to use approaches relevant to the background of a society's organization and community.

2. STUDY METHOD

The ITSP model development uses a mix-method paradigm with a research and development approach. There are five stages in developing an Islami ITSP model. Figure 1 shows these stages.

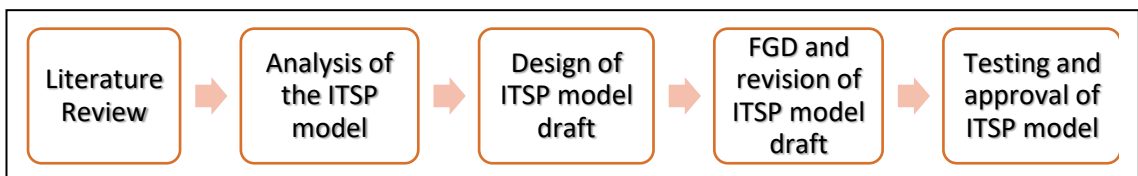


Figure 1. Stages of the Study

The first stage is to review previous research related to ITSP and its impacts. The results of the study found that many IT implementations failed. The cause is a lack of attention to the background, culture, systems, sociology, politics, minds of humanity in an organization (Gwo & Rong, 2003; Hackney & Little, 1999; Teo & Ang, 2000; Clarke, 2001; McNicol, 2005; Tsiakkios & Pashlardi, 2002). ITSP model is not universal for the form of an organization (Malik, 2003). Islamic values need to be incorporated directly into the ITSP process (IDB, 2003). Salva et al. (2013) said that the lack of a model supports IT management.

The second and third stages are studying the ITSP model and the draft design of the Islami ITSP model. Reference ITSP models are MAMPU's ITSP (MAMPU, 2003) and Boar's ITSP (Boar, 2001). The study's focus includes the vision, mission, procedures, stages, completeness of elements, and the meaning of activities. This focus is examined from the perspective of Islamic principles and values. The result of the study is the weaknesses and strengths of MAMPU's ITSP and Boar's ITSP. Based on this study's results, the next step is to design a draft of the Islami ITSP model. The framework of the study is shown in Figure 2:

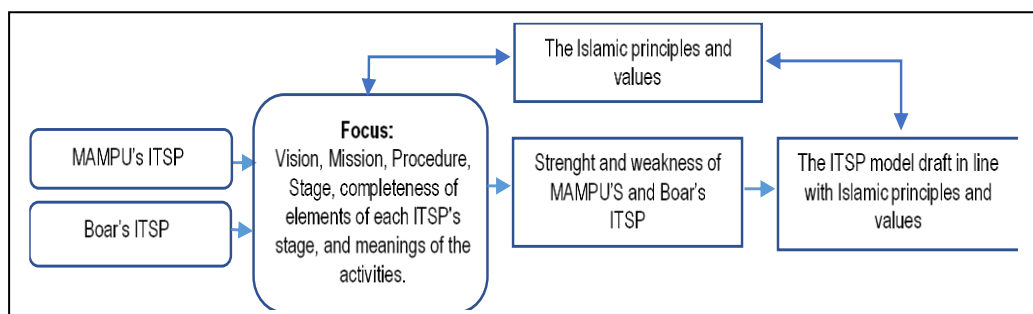


Figure 2. Framework of study

The fourth stage is conducting a Focus Group Discussion (FGD) about the draft Islami ITSP model at three state Islamic universities in Indonesia, namely Universitas Islam Negeri Syarif Hidayatullah Jakarta, Universitas Islam Negeri Maulana Malik Ibrahim Malang, dan Universitas Islam Negeri Alauddin Makasar. The FGD participants were lecturers of informatics and information systems. The focus of the discussion in the FGD is about the systematic stages, completeness of activities, Islamic principles, and values that must be in the ITSP model. The result of this fifth stage is the Islami ITSP model. The fifth stage assesses the effectiveness of the stages and the completeness of activities in the Islami ITSP model by a survey at the same three universities. Respondents included informatics lecturers, information systems lecturers, and IT management practitioners at the same three universities. The instrument in the form of a closed questionnaire. The assessment parameter is the activity effectiveness in the Islami ITSP model. Data analysis using descriptive statistics for quantitative and content analysis for qualitative data.

3. RESULT AND DISCUSSION

The results in the FGD showed that Muslims in three state Islamic universities as the object of study is more respectful of more Islamic statements and terms and promote Islamic values. The Islami ITSP model, as a result of the study, is shown in Figure 3.

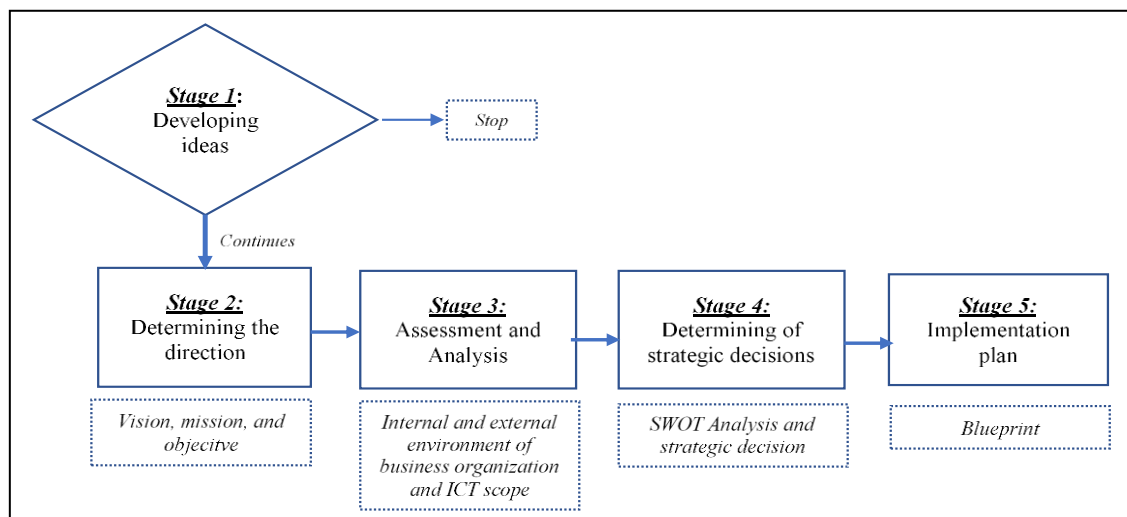


Figure 3. The Islami ITSP model

3.1. Stage 1: Developing Ideas

The purpose of this stage is to build an agreement among stakeholders to develop digital-based management. The developing ideas are the first stage of the ITSP process. Cavalier (2002), states that ITSP belongs to the organization and the involvement of all staff is the primary critical factor. Referring to the University of Saskatchewan Universiti of Saskatchewan (2003), in developing university-based IT management, it includes university stakeholders, such as university leaders, institution leaders, administrators, faculty leaders, and student community leaders. The output of this activity is an agreement or disagreement if disagreement then stops, and if understanding, then continues and establishes the ITSP Team, as shown in the following figure 4.

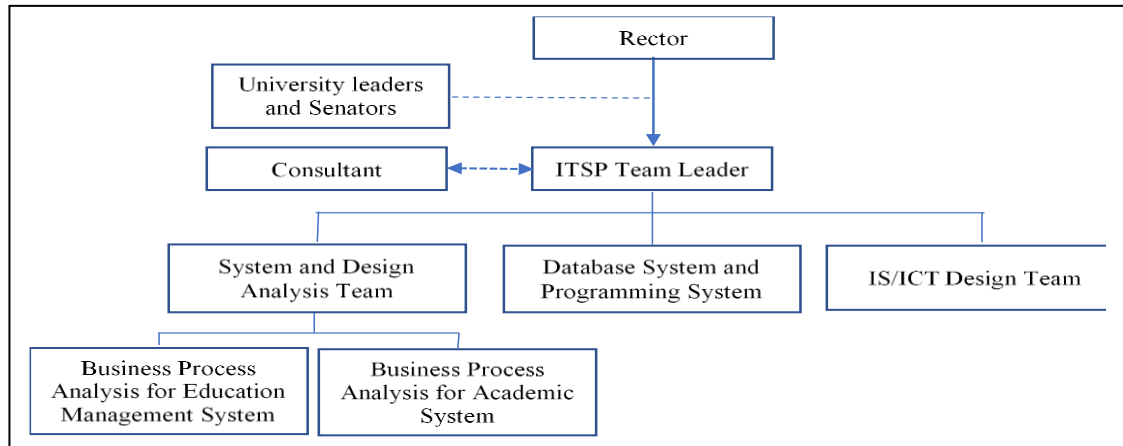


Figure 4. Organization structure of ITSP team

Based on studies of Islamic management theory (Wan Liz, 1996; Naceur, 1994; Azman, 2003; Mohd. Affandi, 1990; Mohd. Shahar, 1991), historical studies of the Prophet (Ismail, 2000; Tahia, 2002), Islamic studies (Al- Munawar, 2004; Madjid, 2000; An-Nabhani, 2006; Djamil, 1997), and tracing Islamic values in the al-Qur'an, then the principles and values of Islamic must be considered in the first stages: owning the Monotheistic belief, collective decision making, stakeholders must have a common understanding, the task is as a mandate, open to change, freedom of views exchange, and open-minded, and concern about the well-being of ummah.

3.2. Stage 2: Determining the Direction

This stage's main objectives are to produce a concept picture of the strategic direction and key performance indicators. There are three activities in this stage, namely:

- a. Identification and analysis of stakeholders. The purpose of this activity is the identification and analysis of the stakeholders of the organization/institution. The purpose of stakeholder analysis is to determine behavior, culture, mindset, expectations, demography, and stakeholders' e-literacy level (Bryson, 2004). The stakeholder analysis results provide useful and valuable information for the vision, mission, and goals formulation.
- b. The vision, mission, and objectives formulations. The purpose of this activity is formulating of vision, mission, goal, and key performance indicators, which is also done and suggested by (Malik, 2003; Silva et al., 2013; MAMPU, 2003; Titthasiri, 2000). In the context of strategic management science, the vision, mission, and objectives of an organization are fundamental factors. It is must exist to provide organization direction in the future (David, 2011). Malik (2003), suggests that IT's vision, mission, and objectives must align the organization strategy.
- c. Discussion. The purpose of this activity is to get approval formulated of vision, mission, and objectives. The stakeholder involvement factor is an essential factor. The output of this activity is the approval.

The alignment model between the IT strategy and the organization/institution strategy, as shown in Figure 5.

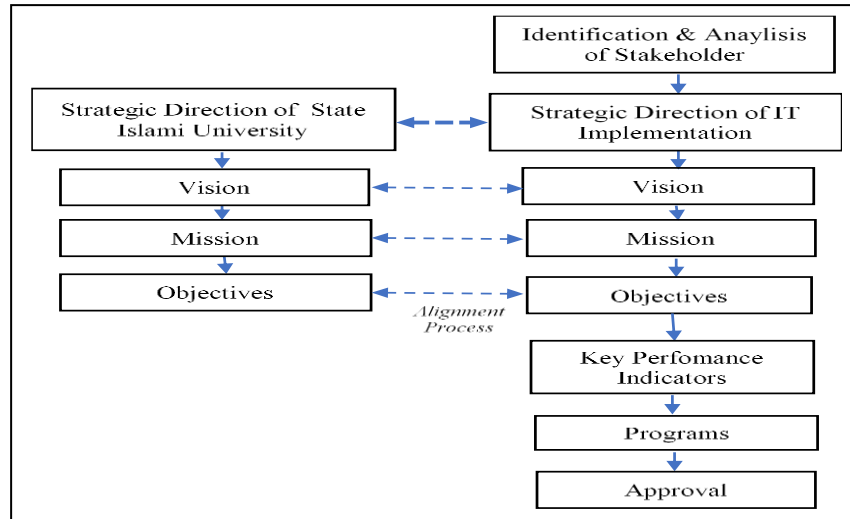


Figure 5. Alignment model of between business strategy and IT strategy

Based on studies of Islamic management theory (Wan Liz, 1996; Naceur, 1994; Azman, 2003; Mohd. Affandi, 1990; Mohd. Shahr, 1991), historical studies of the Prophet (Ismail, 2000; Tahia, 2002), Islamic studies (Al- Munawar, 2004; Madjid, 2000; An-Nabhani, 2006; Djamil, 1997), and tracing Islamic values in the al-Qur'an, then the principles and values of Islamic must be considered in the 2nd stage: the monotheistic belief, life must have clear orientation and guidance to the future, freedom to exchange views and accept others' opinions, all decisions must be made collectively for collective well-being.

3.3. Stage 3: Assessment and Analysis

The purpose of this stage is to assess and analyze the internal and external environment, both the business scope and the IT scope. Referring to David (2011), identifying, understanding, and evaluating the situation are critical success factors. Malik (2003), states that environmental analysis must be done. At this stage, there are three activities, namely:

- a. Assessment and analysis of the internal environment. This activity aims to assess and analyze the organization's internal environment, both the business scope and the current IT conditions. The focus of assessing business scope includes a strategic plan, student and staff character, learning system and education services, management and governance system, social culture, politic, human resources, financial resources, and organizational structure. Meanwhile, the IT scope assessment's focus includes the current IS/IT position, IT management, infrastructure, and human resources of IT. The output of this activity is a weakness and strength in both the business scope and the IT scope. The analysis model is, as shown in Figure 6.

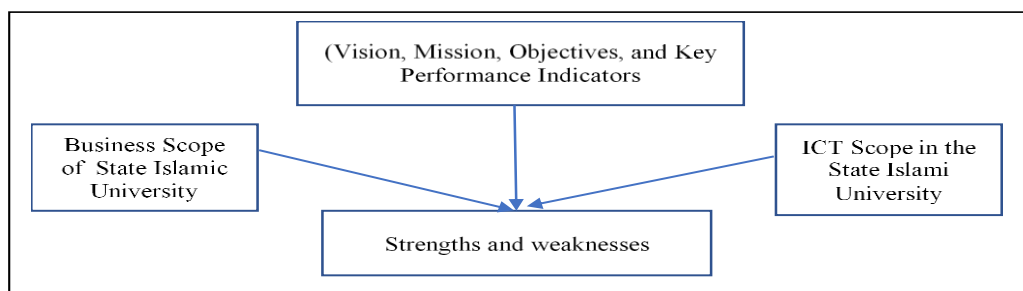


Figure 6. Internal environment analysis framework

- b. Assessment and analysis of the external environment. The activity intends to assess the development and demands of the external environment, both related to the business scope and IT development. The focus of assessment includes trends in higher education business models, demands and expectations of the community about higher education, policies and regulations about higher education, assessing higher education that high quality and having world-class rankings, developments, and trends in IT. The analysis model is thinking and intuition. The output of this activity is a picture of the opportunities and threats.
- c. SWOT Analysis. Strengths, Weaknesses, Opportunity, and Treatment (SWOT) Analysis. The purpose of SWOT Analysis is to find various strategic alternatives. The output of this activity is a list of alternative strategies that will be considered in strategic decisions.

This stage's output is understanding weaknesses, strengths, opportunities, threats, and strategic decisions. The relationship between these activities is, as shown in Figure 7.

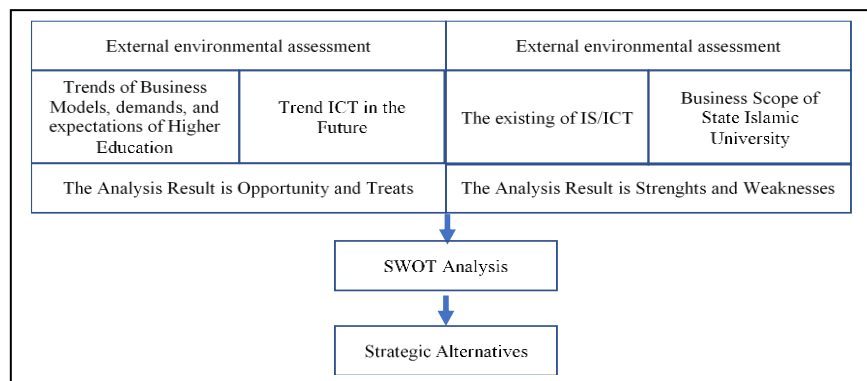


Figure 7. Assessment and analysis framework

Based on studies of Islamic management theory (Wan Liz, 1996; Naceur, 1994; Azman, 2003; Mohd. Affandi, 1990; Mohd. Shahaar, 1991), historical studies of the Prophet (Ismail, 2000; Tahia, 2002), Islamic studies (Al- Munawar, 2004; Madjid, 2000; An-Nabhani, 2006; Djamil, 1997), and tracing Islamic values in the al-Qur'an, then the principles and values of Islamic must be considered in the third stage: progressive acting rightly in a balanced manner, all decisions must be made collectively, imposing responsibility, and continuous environmental assessment.

3.4. Stage 4: Determining of Strategic Decisions

The purpose of this stage is to choose and determine the best way or decide to achieve the strategic direction. Right strategic decisions when able to integrate strengths and opportunities and minimize weaknesses and threats. Referring to MAMPU (2003), strategic decisions are important factors to get a competitive advantage. Strategic decisions based on the strategic direction. The selection of strategic decisions focuses not only on technology but also on the interests and backgrounds of stakeholders (Malik, 2003a). There are four activities in this stage, namely:

- a. Determine the target. The purpose of this activity is to set targets. To achieve these goals, we should determine targets for the business scope and the IT scope. To achieve the target of these scopes each, determining the target must be preceded by questions. For example, what will be achieved? How is the design of IS strategic? Etc. The output of this activity is a target concept of each scope.
- b. Choosing and setting strategic. To achieve the above targets, it needs the support of various strategies. To get a suitable strategy, the selection of strategies must be in communication with the strategic direction. The output of this activity is a strategic decision that fits each target for each scope.

- c. Change management. This activity aims to ensure that strategic changes are carried out in a controlled and systematic manner, anticipating resistance, increasing stakeholder involvement, and implementing based on targets. Referring to Malik (2003), Malik (2003a), when an organization implements IT correctly, this means making changes. Change is dealing with resistance. Therefore, changes need to be done systematically. The output of this activity is a description of the changing concept.
- d. Discussion. The objectives of this activity are to involve stakeholders and get approval.

The outputs of this stage are strategic decisions, programs, and specific activities for each scope. The relationship of activity in this stage is as in Figure 8.

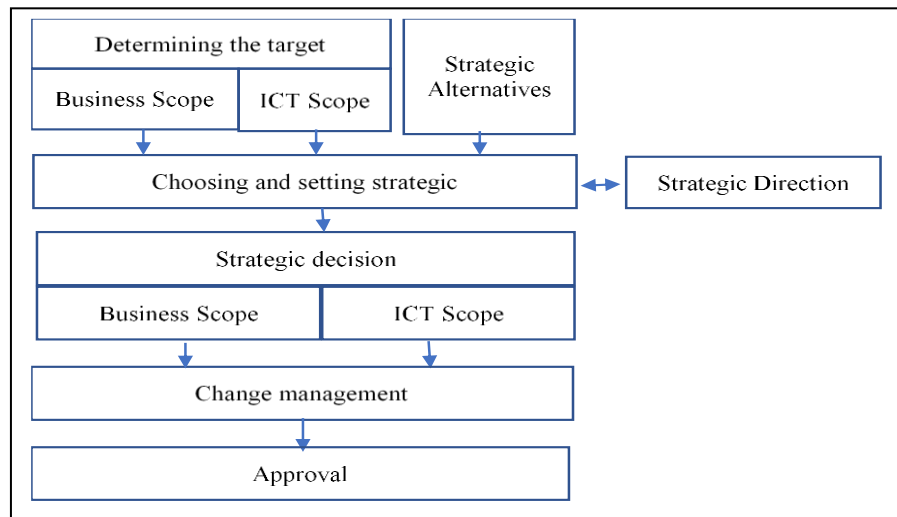


Figure 8. Determining strategic decisions framework

Based on studies of Islamic management theory (Wan Liz, 1996; Naceur, 1994; Azman, 2003; Mohd. Affandi, 1990; Mohd. Shahr, 1991), historical studies of the Prophet (Ismail, 2000; Tahia, 2002), Islamic studies (Al- Munawar, 2004; Madjid, 2000; An-Nabhani, 2006; Djamil, 1997), and tracing Islamic values in the al-Qur'an, then the principles and values of Islamic in the fourth stage are: owning the monotheistic belief, realizing the freedom in expressing thoughts and willingness to accept others' views, acting rightly in a balanced manner, all decisions collectively, all duties must responsibly, and collective well-being.

3.5 Stage 5: Implementation Plan

The purpose of this stage is to the implementation plan formulate of the results of the ITSP process. The implementation plan concerns the time, organizational resources, and priority scale. The implementation plan is an integral part of ITSP and who is responsible. ITSP developed by (Silva et al., 2013; MAMPU, 2003; Titthasiri, 2000), the implementation plan is also part of the process ITSP. Referring to Bryson (2004) and David (2011), the implementation plan is the final stage of the strategic planning process. Besides, the implementation plan is on supervision, control, and evaluation at the time of implementation.

Based on studies of Islamic management theory (Wan Liz, 1996; Naceur, 1994; Azman, 2003; Mohd. Affandi, 1990; Mohd. Shahr, 1991), historical studies of the Prophet (Ismail, 2000; Tahia, 2002), Islamic studies (Al- Munawar, 2004; Madjid, 2000; An-Nabhani, 2006; Djamil, 1997), and tracing Islamic values in the al-Qur'an, then the principles and values of Islamic at the last stage: owning the monotheistic belief, avoid wasting time and resources, acting rightly in a balanced manner, all decisions collectively, imposing responsibility, the program must be flexible.

The results of testing the effectiveness of each stage and components are shown in Table 1.

Table 1. The component assessment results of the Islami ITSP model.

Stage	Activities	Percentage
Developing ideas	Developing ideas with stakeholder	93.47%
	Determine the ICTSP team	88.98%
	<i>Average</i>	<i>91.22%</i>
Determining the direction	Identification and Analysis of stakeholder	86.16%
	The vision, mission & objectives formulationa	95.51%
	Discussion	82.45%
	<i>Average</i>	<i>88.04%</i>
Assessment and analysis	Assessment and analysis of the internal environment	84.22%
	Assessment and analysis of the external environment	82.59%
	SWOT Analysis	94.29%
	<i>Average</i>	<i>87.03%</i>
Determining of strategic decision	Determining the target	79.59%
	Choosing and setting strategic	88.16%
	Change management	89.80%
	Discussion	83.67%
	<i>Average</i>	<i>85.31%</i>
Implementation plan	Mapping the design of ICT implementation	91.02%
	Planning the ICT human resources development plan	91.02%
	Prediting the financial implications	94.69%
	Approval	95.92%
	<i>Average</i>	<i>93.16%</i>

Table 1 above shows that the Islamic ITSP model is useful to guide the strategic planning process in the field of information technology in Islamic universities in Indonesia. Because the ITSP model promotes the involvement of key stakeholders during the strategic planning process, stakeholders' involvement has a significant role in the successful implementation of information technology in public organizations. On the other hand, the Islamic ITSP model contains Islamic principles and values that should concern the planning team. Therefore, the planning team must pay attention to two aspects of the organization's technology and social aspects in a balanced way.

CONCLUSION

The purpose of this study is to develop an Islamic ITSP model. The Islamic ITSP model is a strategic planning model in information technology that emphasizes Islamic principles and values. The results of the development of the Islamic ITSP model must begin with developing ideas with stakeholders. This stage is very critical in achieving the successful implementation of information technology in public organizations. Which stakeholders who feel involved in the strategic planning process feel responsible for the strategic planning results. Meanwhile, the second stage to the fifth stage has similarities with the ITSP model that has been formulated by previous experts. However, the difference is that each stage in the ITSP Islamic model contains Islamic principles and values that must be considered by the planning team. Therefore, this first stage holds a critical factor in the subsequent stages.

Recommendations for professionals in information technology or information systems, the Islamic ITSP model, is still limited to the results of model formulation and testing. Therefore, this model

can be used and tested further, both for research purposes and as a guide in developing public organizations' information technology-based management.

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