Synthesis of Information Technology Service Management Model in Academy on International Standard

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***Abstract*—This research aim is to synthesis of Information Technology Service Management Model in Academy on International Standard (ITSM Model in AIS). The research methodology is divided into 2 steps which are: 1) Synthesis of ITSM Model in AIS. 2) Evaluation to accrediting ITSM Model in AIS. The sample is expert group in arranging information technology service management are selected from purposive sampling. The research tools are ITSM Model in AIS and Evaluation Form. The process is to collect the indicators according the international standards. There are many standards and each standard has a focus or priority in the information technology service management. Different implementation of such synthesis makes the standard practices and confirms that are clearly different. In this synthesis to prototype elements and regulations for the study and application of ITSM Model in AIS. The statistics used in the research are Arithmetic Mean and Standard Deviation (S.D). The research findings are: 1) The results of synthesis as follow; the ITSM Model in AIS have 2 elements and regulations have 10 item from international standard framework. 2) After the 13 experts have evaluated the design of model, they give the opinion that the design of ITSM Model in AIS is developed to be in the highest level of appropriateness and consensus.**

***Index Terms*—ITSM model, information technology service management, service management**

I. Introduction

Thailand academy is implement information technology in education management, learning process, and research. The requirements of technology services increase from stakeholder. Academy should have information technology service management system is efficiency. It should have ability to analysis and evaluation of threats on information system, under control international standards. Each country was creating standard of Information Technology Service Management. Development Aim is to utilize in tool of strategic of academy more than use for service. The result for synthesis elements and principle of Information Technology Service Management for Academy cause of efficiency instruction Information Technology Service Management. The synthesis elements and principle of Information Technology Service Management be able to apply with other Academy. This article should be advantage in Information Technology Service Management in Academy for the future. [1] and [2]

II. Information Technology Service Management on International Standard

A. ISO/IEC 20000

ISO/IEC 20000 is the International Standard for IT Service Management processes. ISO/IEC 20000 provides a recognized certification against which an organization can demonstrate to their customers that its IT Service Management processes represent best practice. It will be published as two documents,

ISO/IEC 20000-1, which is the Specification for Service Management [3].

ISO/IEC 20000-2, which is the Code of Practice for Service Management [4].

B. Information Technology Infrastructure Library (ITIL)

ITIL is a de-facto standard which introduced and distributed by Office of Government Commerce (OGC) in UK and includes all IT parts of organizations. At present ITIL is the most widely accepted approach to IT Service Management in the world. It has an interactive, multidimensional and lifecycle form structure. ITIL has an integrated approach as required by the ISO/IEC 20000 standard with following guidance.

III. Purpose of the Research

- To synthesis of Information Technology Service Management Model in Academy on International Standard.
- To evaluate Information Technology Service Management Model in Academy on International Standard.

IV. Research Framework

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Conceptual framework in Information Technology Service Management Model in Academy on International Standard can be shown in Fig. 1. From the conceptual framework to synthesize document and research studies related to Information Technology Service Management on International Standard.

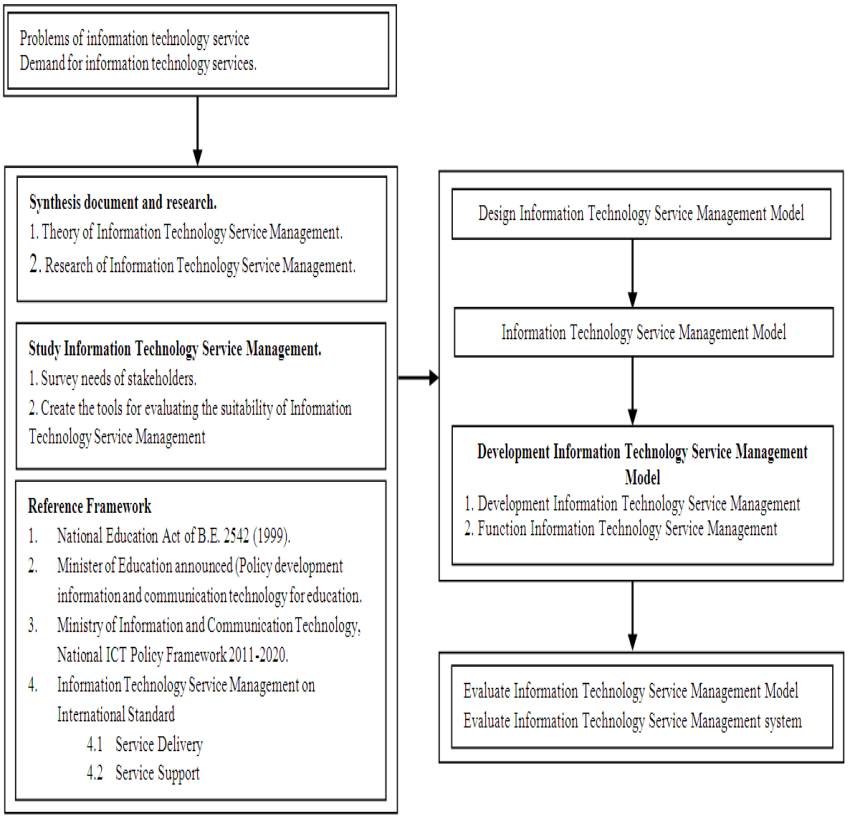

Figure 1. Conceptual framework in information technology service management model in academy on international standard (ITSM Model in AIS).

V. Methodology

The research methodology is divided into 2 steps which are:

A. The First Step

Synthesis of ITSM Model in AIS

- Synthesis of Information Technology Service Management Model in Academy on International Standard (ITSM Model in AIS) by document and research studies related to Information Technology Service Management Model in Academy on International Standard
- Design ITSM Model in AIS from document and research.
- Create the tools for evaluating the suitability of Information Technology Service Management Model in Academy on International Standard

B. The Second Step

Evaluation to accrediting ITSM Model in AIS

- Present the developed information system model to the 13 experts have evaluated the design of model, they give the opinion that the design of ITSM Model in AIS.
- Analyze the results of evaluation of the design using means ($\overline{X}$) and standard deviation (S.D.) following the weighing criteria of appropriateness of the design using five rating scales of Likert.

VI. Conclusion

The findings from the research study of Information Technology Service Management Model in Academy on International Standard can be shown in Fig. 2.

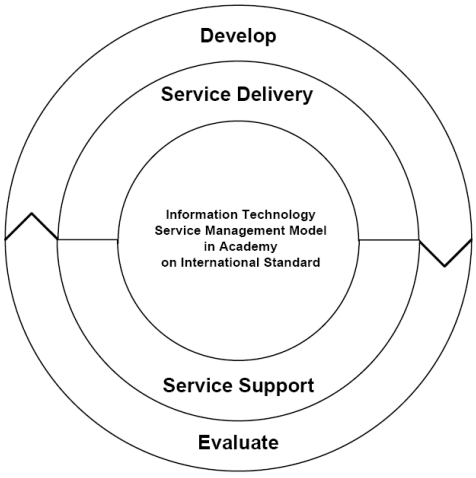

Figure 2. Information technology service management model in academy on international standard (ITSM Model in AIS).

A. Service Delivery [5]-[7]

It discusses the processes necessary in planning and developing high quality IT services. This is a long term process that is connected with developing and delivering quality IT service. This includes the following: Service Level Management, Financial Management for IT Services, Capacity Management, IT Service Continuity Management, and Availability Management.

1) Service level management

Service level management provides a mechanism to align the IT services with the business requirements. Service level management provides a structured way for customers and providers of IT services to meaningfully discuss and assess how well a service is being delivered. The primary objective of service level management is to provide a mechanism for setting clear expectations with the customer and user groups with respect to the service being delivered. Activities included in the process are creating a catalog of services, identifying requirements, negotiating SLAs, and managing service continuity, availability, capacity, and workforce.

2) Financial management for IT services

Financial Management for IT Services process introduces the concept of Budgeting, Accounting and Charging for IT services delivered to the customers. Budgeting and Accounting involves understanding the cost of providing various services. Financial management ensures that any IT service proposed is justified from a cost and budget standpoint. This is often referred to as a cost-benefit analysis. Activities performed within the function include such standard accounting practices as budgeting, cost allocations, and others. The concept of charge back allows internal IT departments to function as a business unit, controls non-essential demands from customers and allows customers to demand value for money.

3) Capacity management

Capacity management activities include planning, sizing, and controlling service solution capacity to satisfy user demand within the performance levels set forth in the SLA. This requires the collection of information about usage scenarios, patterns, and peak load characteristics of the service solution, as well as stated performance requirements. These data collection activities are included in the Capacity Management process.

4) - IT Service continuity management

IT service continuity management, also known as contingency management, focuses on minimizing the disruptions to business caused by the failure of mission-critical systems. This process deals with planning to cope with and recover from an IT disaster. It also provides guidance on safeguarding the existing systems by the development and introduction of proactive and reactive countermeasures. IT service continuity management also considers what activities need to be performed in the event of a service outage not attributed to a full-blown disaster.

5) Availability management

The goal of availability management is to ensure that the IT services are available to users when they need them. Availability is calculated and reported as percentage of the agreed service hours for which the service was available.

B. Service Support [7]-[9]

This explains the different processes that are associated with the everyday maintenance and support that is needed in IT services. This includes Configuration Management, Incident Management, Problem Management, Change Management, and Release Management.

1) Configuration management

The Configuration Management process is responsible for identifying, recording, tracking, and reporting of key IT components or assets called configuration items (CIs). The information captured and tracked depends on the specific CI, but often includes a description of the CI, the version, constituent components, relationships to other CIs, location/assignment, and current status. Configuration items typically correspond to each of the assets placed under the control of the Change Management process. CIs are typically recorded in a configuration management database (CMDB). The Configuration Management process is concerned with establishing, maintaining, and managing the CIs and CMDB.

2) Incident management

The primary goal of incident management is to restore normal service operation as quickly as possible and minimize the adverse impact on business operations, thus ensuring the maintenance of the best possible quality and availability of levels of service within the limits of the SLA.

3) Problem management

The goal of Problem Management is to minimize the adverse impact of Incidents and Problems on the business. Problem Management process maximizes IT services by putting right what is wrong and preventing recurrences. In other words it follows a philosophy of cure reactively and prevent proactively. Problem Management proactively analyses and trends Incidents and Problems to prevent the occurrence of further Incidents and Problems.

4) Change management

Goal of Change Management process is to ensure that standardized methods and procedures are used for efficient and prompt handling of all changes, in order to minimize the impact of change related problems upon IT service quality and consequently to improve the day to day operations of the organization. The Change Management process is responsible for managing changes to ensure that all parties affected by a given change are aware of and understand the impact of the impending change. It is also responsible for minimizing or mitigating disruptions or adverse effects due to change. Change management should be applied to any asset in the environment that is necessary for meeting the service level requirements of the solution.

5) Release management

The Release Management process facilitates the introduction of software and hardware releases into managed IT environments. Release management coordinates with the change and configuration

management processes to ensure that the shared CMDB is kept up-to-date with changes implemented by new releases and that the software content of those releases is stored in the definitive software library (DSL). Release management builds and manages release rollout plans and works with development teams and the customer during planning and development in order to facilitate a smooth rollout

The results from evaluation of Information Technology Service Management Model in Academy on International Standard can be seen in Table I and Table II.

TABLE I. THE RESULTS FROM EVALUATION OF ITSM MODEL IN AIS

Evaluation Lists	*Results*		*Level of Appropriateness*
	$\overline{X}$	*S.D.*	
Principles and Concepts	4.69	0.461	Highest
Objectives	4.53	0.498	Highest
ITSM Model in AIS	4.53	0.630	Highest
Summary	4.58	0.530	Highest

The Table I shows that the experts agree that a ITSM Model in AIS from the results of the evaluation as shown in Table I, the appropriateness of details in the Information Technology Service Management Model in accordance in Academy on International reveal that the appropriateness is at the highest score (means = 4.58). In fact, the first two highest means from the highest to the lowest were Principle and conceptual with the highest score of ($\overline{X}$ = 4.69). The second rank go to Objectives and ITSM Model in AIS ($\overline{X}$ = 4.53).

TABLE II. THE RESULTS FROM EVALUATION OF REGULATIONS ITSM MODEL IN AIS

Regulations	*IOC Results*	*Level of Consensus*
Service Delivery	0.92	Highest
Service Support	0.90	Highest

The Table II shows that the experts agree that Regulations ITSM Model in AIS from the results of the evaluation as shown in Table II, the appropriateness of details in the Information Technology Service Management Model in accordance in Academy on International reveal that the appropriateness is at the highest score (means of IOC = 0.91). In fact, the first three highest means from the highest to the lowest were Service Delivery with the highest score of (IOC = 0.92). The second rank go to Service Support (IOC = 0.90).

VII. CONCLUSION AND DISCUSSION

The synthesis of ITSM Model in AIS findings are: 1) the results of synthesis as follow; the ITSM Model in AIS have 2 elements and regulations have 10 item from international standard framework. 2) after the 13 experts have evaluated the design of model, they give the opinion that the design of ITSM Model in AIS is developed to be in the highest level of appropriateness and consensus. However, the introduction to use elements and regulations in academy institutions is taking into account the availability and limitations of each institution in the field of investment, the scope and value. Which it is may not require all of the regulations.

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