

Information Model for Non-Formal Education Management in Thai Supply Chain

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Abstract—The study aim to develop and to evaluate information model for non-formal education management in Thai supply chain. The sample groups were three experts in supply chain management, three experts in Information and technology and four experts in curriculum. The research tool was evaluation form to evaluate information model for non-formal education management in Thai supply chain comprises five main components, namely Raw materials, Supplier, Manufacturer education, Finished product and Customers. The data analysed by using arithmetic mean and standard deviation information model for non-formal education management in Thai supply chain using Back-Box technique. The results from experts have evaluated the model and commented that the model is high level of appropriateness, suggesting that information model to support sustainable information development.

Keywords— *Information model, non-formal Education management, Thai supply chain*

1. Introduction

Age of globalization, Thai government has realized Thailand, the importance of lifelong education has been recognized since 1940 when the government established the Adult Education Division to provide no formal and informal education for post-school-age people and adults. But the concept of lifelong education was officially introduced in the National Education Plan in 1977. This Plan stated that “education is a continuing process through-out life”. Later, in 1999, the National Education Act 1999 was promulgated. The Act proposed a lifelong education philosophy as a principle and a framework for organizing the whole education system of the country. The main aim for reforming education under this Act was to make concerted efforts to develop a truly workable lifelong learning process. In the age of globalization, the Thai government has recognised the need of lifelong learning since 1940, when it formed the Adult Education Division to offer post-schoolers and

adults informal and formal education. But the National Education Plan, published in 1977, was the first document to formally promote the idea of lifelong learning. According to this plan, “learning is a continuous process throughout life.” The National Education Act 1999 was later published in 1999. The Act called for the organization of the nation's whole educational system around the idea of lifelong learning. The primary objective of this Act's education reforms was to make deliberate efforts to create a lifetime learning process that is actually practical. Since then, lifelong learning has been emphasized in the majority of educational strategies and policies. For instance, lifelong learning for everyone has been a goal of the National Education Development Plan 2009 to 2016 and the Proposals for the Second Decade of Education Reform 2009 to 2018. The goal of the National Education Development Plan 2016–2036 is to provide all Thai citizens with access to high-quality lifelong education. The purpose of the nation's educational system, according to this Education Act and the Plans, might be argued to be lifelong education for everyone. The government has urged all sectors to participate in organizing and supporting lifetime learning in every aspect of society in order to enable lifelong education in Thailand to achieve the intended goal: quality lifelong education for all.[11] the use of the supply chain management information system idea. It's because of the increasing levels of competition from both within and outside the nation that the commercial and industrial sector must be extremely competitive. Organizations in the sector want employees with knowledge, aptitude, and skills who can work effectively to enhance productivity in order to be highly competitive. Therefore, the firms must have the knowledge and resources to raise their standards and meet customer demand. As a result, the supply chain management process serves as the foundation for the organization's entire system of activities, from upstream to

downstream.. [1] Thus, the researcher had an idea to develop and to evaluate information model for non-formal education management in Thai supply chain.

2. Related Work

2.1 Supply Chain Management
Kham Nai (2012) said that education supply chain management needs to consider various elements. Which has a relationship between various organizations with a clear goal of reducing the operational process of the system Increase service levels leading to efficiency Meet the needs of customers In general, the supply chain consists of important points, namely 1. Suppliers mean those who send raw materials to service units such as producing quality graduates to society etc. 2. The unit (Manufacturer) means the person who is responsible for transforming the raw materials received from the supplier. To have higher value 3. Distribution Center (Distribution Centers) means the point that serves to distribute products to the consumer or the customer at the center. One product distribution may have products from many agencies, such as higher education institutions. There will be graduates graduating from many institutions. 4. Retailers or customers means the end of the supply chain. Which is where the products or services must be used until the value is exhausted and without adding value to that product or service.

Douglas and Matias (2017). Supply Chain Management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders.

Felea and Albastroi, (2013) suggested the business enterprise networks include manufacturers, raw material, suppliers, transportation, providers, wholesalers, retailers as well as other intermediaries including customers. Verma and Boyer (2010) pointed out that business organizations in the supply chain will work together to turn raw materials into products and deliver to customers. between organizations which will be linked in both physical, data and money circulation.

Chansamut and Piriyasurawong (2014) suggested conceptual framework of supply chain management information system for curriculum management based on Thailand Qualifications Framework for Higher Education. The objectives of this research are (1) to synthesize a conceptual framework of supply chain management information system for curriculum management based on Thailand Qualifications Framework for Higher Education; and (2) to evaluate the conceptual framework of supply chain management information system for curriculum management

based on Thailand Qualifications Framework for Higher Education. The research sample totaling 10 experts consisted of five experts on supply chain management, two experts on curriculum, and three experts on information technology. The employed research instrument is a questionnaire. Statistics employed for data analysis are mean and standard deviation.

The research methodology consisted of six phases: (1) the studies and syntheses of related documents, research studies, and articles; (2) the drafting of preliminary conceptual framework; (3) the identification of experts; (4) the development of an evaluation form to assess appropriateness of the conceptual framework; (5) the data collection and analysis; and (6) the final improvement of the conceptual framework based on suggestions of the experts.

Based on Thailand Qualifications Framework for Higher Education, research findings indicate that the synthesised conceptual framework of supply chain management information system for curriculum management has four main parts: suppliers, universities (manufacturers), education customers, and consumers. According to the experts' evaluation results, the conceptual framework is rated as being at a decent level with a mean of 4.07 and a standard deviation of 1.10. The evaluation findings for sub-component appropriateness are as follows:

1. The appropriateness rating mean for sub-components of the Supplier component is 4.15, which can be interpreted to be at the good level.

2. The appropriateness rating mean for sub-components of the University component is 4.20, which can be interpreted to be at the good level. This is because the University component contains the sub-components at the decision making level of the educational supply chain.

3. The appropriateness rating mean for sub-components of the Education Customers component is 4.20, which can be interpreted to be at the good level. This is because the Education Customers component contains the sub-components of direct service receivers.

4. The appropriateness rating mean for sub-components of the Consumer component is 4.10, which can be interpreted to be at the good level. This is because the Consumer component contains the sub-component of customers as the end-of-supply chain process that affect the quality of graduates to be delivered to the society.

The overall evaluation result for the synthesized conceptual framework of supply chain management information system for curriculum management based on Thailand Qualifications Framework for Higher Education shows the overall rating mean of 4.14 and standard deviation of 1.00, which means that the synthesized conceptual framework is

appropriate at the high level and can be appropriately applied in actual work settings.

Information and Supply Chain

A crucial mechanism for assisting the education sector's entire system of activities, from upstream suppliers to downstream customers, is information and supply. It enables the organization to quickly assess the information technology and supply chain to guarantee that the business runs efficiently and successfully in accordance with the chosen strategies. The process consisted of suppliers, manufacturer and customers.

3. Research Methodology

3.1 Synthesis of information model for non-formal education management in Thai supply chain.

3.2 From documents, studies, and articles, create information model for non-formal education management in Thai supply chain

3.3. Create the tools for evaluating the suitability of information model for non-formal education management in Thai supply chain

3.4 Present the developed information model to the three experts in supply chain management, three experts in Information and technology and four experts in curriculum..

3.5 Analyze the model's evaluation results using the mean and standard deviation for the five criteria that make up the Likert scale.

4 Results

4.1 Information model for non-formal education management in Thai supply chain is composed of four main elements namely Supplier, Manufacturer education, education customers and consumers. the details thereof are shown in Figure 1.

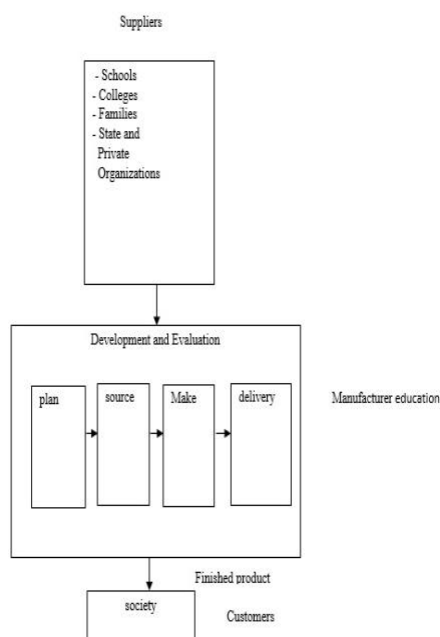


Figure 1: Information model for non-formal education management in Thai supply chain

4.2 Describe of information model for non-formal education management in Thai supply chain

1 Suppliers

Suppliers are businesses or individuals who generally provide raw materials to manufacturers. They can use the computer system that can process and save the data to submit an application for admission.

2 Manufacturer education

The Manufacturer education means organization of the non-formal and Informal Education. It will carry out its obligation to assess and develop students. It is based on the idea that all supply chain tasks and activities can be broken down into four basic steps: plan, source, make, and deliver. These steps include hiring instructors and admitting students, developing curricula, providing learning activities for student growth, providing training for fieldwork experiences, evaluating learning outcomes, and reporting on the outcomes of curricula implementation.

4.3 Finished product

Finished product mean graduated from an organization.

4.4 Customers

Customers refer to the model's end-of-process component, which is the society or organization that provides informal and non-formal education.. [1],[2],[3],[4],[5],[6],[12]

Table 1: Results for evaluation of information model for non-formal education management in Thai supply chain

No	Evaluation Lists	\bar{X}	S.D.	Suitability
1	Raw materials	3.62	0.66	High
2	Suppliers	3.62	0.72	High
3	Manufacturer education	3.70	0.53	High
4	Finished product	3.50	0.84	High
5	Customers	3.75	0.51	High
	Summary	3.64	0.65	High

From Table 1, it can be concluded that information model for non-formal education management in Thai supply chain is highly appropriate, with the total rating mean of 3.64. and The raw materials, Supplier, Manufacturer education, Finished product and customers are highly appropriate also.

5. Discussion

Information model for non-formal education management in Thai supply chain comprises five main components, namely Raw materials, Supplier, Manufacturer education, Finished product and Customers. The model is considered to be high appropriate ($\bar{X} = 3.64$, S.D. = 0.65), and the design was corresponds to the research of Chansamut and Piriyastrawong has studied supply chain and

information system about educational [1] In addition, with the study of chansamut suggesting that supply chain and information system . [2],[3],[4],[5],[6]

6. Conclusion

Information model for non-formal education management in Thai supply chain comprises five main components, namely Raw materials, Supplier, Manufacturer education , Finished product and Customers. The model is appropriate at the high level development ($\bar{X} = 3.64$, S.D. = 0.65). Suggesting that information model to support sustainable information development.

7. Recommendation

Information model for non-formal education management in Thai supply chain comprises five main components, namely Raw materials, Supplier, Manufacturer education , Finished product and Customers. After considering model for non-formal education management in Thai supply chain is considered to be high appropriate if possible it should create database for the developed model.

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