# Supply Chain operation Model in Digital for Curriculum Management Based on Thailand Qualifications Framework for Higher Education

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Abstract— Supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education is important for the effectiveness of the model as well as the application in actual work settings. Literature on supply chain management and digital in higher education institute was reviewed. Supply chain operation model in digital is composed of 7 principal components, namely ,Raw materials , Suppliers , University, Finished product, customer, Satisfaction , Feedback. The objective of this research was to develop and evaluate the supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education. The sample are 15 experts selected by purposive sampling. The data is analyzed by means and standardized deviations. The measurement and the evaluation of model are based on Black-Box Testing, which is the test of total system function in order to see whether the working procedures are correct and in compliant with the desired objectives or not. All experts, after evaluating the model, agreed that supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education was appropriate in a good level.

*Keywords*—*supply chain operation model in digital, curriculum management,* Thailand qualifications Framework for higher education

# 1. Introduction

The present education system is very important, and the Thai government has realized the importance of improving the country to increase its capability to compete with other countries in every aspect. Especially, in educational development that leads to the development of quality products , the government has formulated the following policy: "To develop quality of people, as the people are human resources of the country and the key component in all aspects of development, to reform the whole system of education, to expand education and modify educational structure, to decentralize educational administration to the provinces so that educational management becomes more thorough and responsive to the local needs".[6] This policy also includes the establishment of private and public higher education institutions to meet the needs for national development and development of individuals who want to further their studies. One of the strategies is the application of the supply chain management system to educational development in order to increase competitive ability. As Thailand is a part of world community, it needs to urgently develop its research systems for the development of the country and enhance academic excellence. As such, the government has formulated an important policy that "The creation of a stable knowledge-based economy and environmental factors must support Thailand to be a center of goods and service production in the region based on creative thinking, creation of innovations, and extension of the body of knowledge in order to support the adjustment of the structure of production and service sector in every stage of supply chain. This is to enable the creative economy to be a new mobilizing power that leads toward a balanced and sustainable economy in the long run, together with the creation of the assurance system and the supply chain system, the management of economic risks, and the creation of the free and just atmosphere to facilitate the production, commerce and investment inclusive of the development of new entrepreneurs, the creation of infrastructure and internal logistics networks that connect with other countries in the region." Based on this policy, the 12th National Plan for Social and Economic Development was formulated .[1],[7] Thus, The researcher had an idea to develop and evaluate the supply chain operation model in digital

for curriculum management base on Thailand qualification framework for higher education as a tool to support the educational management process and add value for consumers.

# 2. Literature review

Supply chain management in higher education

Chansamut (2016) pointed out that education chain needs to consider supply various components. supply chain 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, supply chain consists of important points, namely suppliers, manufacturers, customers, and consumers, All components can connect with digital technology in the management of logistics and supply chain that produce graduates and respond to the demand of consumers.

Supply Chain is one of the goals that help education institutions improve efficiency and reduce education institutions expenses, high value customers and suppliers can be added or retained by maintaining a reliable supply chain and digital. These will promise the educational institution to the goal to produce high-caliber graduates who have been qualified in terms of knowledge ,professional skills moral effectiveness, and working quality.

# **3. Research Framework**

Conceptual framework of Supply chain operation model in digital for curriculum management base on thailand qualification framework for higher education, , as shown in figure 1.

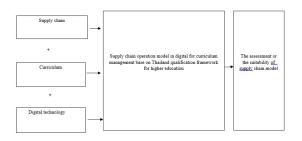


Figure 1 : Research framework

## 4 Research methodology

#### 4.1 Population

Population is the experts in the fields of supply chain, curriculum and digital.

#### 4.2 Sample group

Sample group is the 15 experts in the fields of supply chain, curriculum and digital, all of whom are chosen by means of purposive sampling and have at least 5 years of experiences.

#### 4.3 Variables of the Study

Independent variable are supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education and Dependent variable is the suitability of supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education.

#### 4.4 Research Tool

A questionnaire to assess supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education.

The research methodology has the following steps.

4.4.1 Study and analyze the documents and researches relevant to the supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education.

4.4.2 Use the obtained data to establish the following conceptual frameworks for the development of model.

4.4.3 Present supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education to the advisor for revision.

4.4.4 Create the tools for evaluating the suitability of supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education.

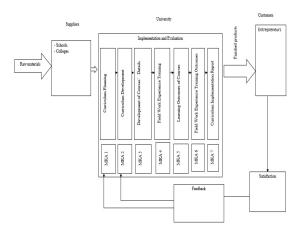
4.4.5 Present the developed model to the 15 experts in the fields of supply chain , curriculum and digital.

4.4.6 Analyze the data based on evaluation criteria and suitability criteria of supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education.

# **5** Results

4.1 Supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education as Followings

Part 1 Supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education



**Figure 2:** Supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education

MKA stands for Mo. Ko. Ao. (in Thai language) which means "Qualification Standards for Higher Education". There are seven qualification standards for higher education: MKA 1 - MKA 7

#### 5.2 Principles of model :

#### 4.2.1 Raw materials

Raw materials mean student who sent from their families or government and private agencies.

#### 5.2.2 Suppliers

Suppliers mean high school or college that supply raw materials to the manufacturer. Raw materials in this case are students who graduated from high schools or two-year colleges, or students who receive special quotas for admission. They can apply for admission via a digital model.

#### 5.2.3 Manufacturer

The manufacturer means the university that produces graduated students. It performs the duty to transform raw materials into the finished products of qualified graduated students. The university will perform its duty of student implementation and evaluation. It is based on the consideration that all supply chain tasks and activities can be assigned (MKA 1 - MKA 7) of each activity, namely. recruitment of instructors and admission of students, curriculum planning, curriculum development, provision of learning activities for student development, provision of fieldwork experience training, evaluation of learning outcomes, and reporting of curriculum implementation results.

5.2.4 Finished products

The finished products mean graduated students from the university.

5.2.5 Customers

Customers mean entrepreneurs or the end-ofprocess component of the model. They include the society in general and entrepreneurs who receive and/or employ the students who graduated from the university. Finally, the end product of qualified graduated students will add value for customers with supply chain.

#### 5.2.6 Satisfaction

Satisfaction refer to an important factor in doing any prosperous work. To generate satisfaction for the business owner or entrepreneur, the evaluation of satisfaction in the products and services with the customers or to evaluate the satisfaction of graduates in terms of qualifications are assigned. 5.2.7 Feedback

Feedback is the Information obtained from satisfaction analysis with the relationship between productivity and customers which will be feedback to expected learning outcomes and curriculum details for an implementation and improvement of the learning process are much better. [1],[2],[3],[4],[5],[8],[9],[10],[11],[11],[13],[14], [15],[16]

# 6. Conclusion and discussion 6.1 Conclusion

**Table 1.** Appropriate level of supply chainoperation model in digital for curriculummanagement base on Thailand qualificationframework for higher education.

No.	Evaluation Lists	X	S.D	Level of Quality
1	Main	3.60	4.34	Good
	elements			
2	Raw materials	3.60	0.50	Good
3	Suppliers	3.60	0.82	Good
4	University	3.66	0.48	Good
5	Finished product	3.60	0.50	Good

No.	Evaluation Lists	X	S.D	Level of Quality
6	customer	3.60	0.82	Good
7	Satisfaction	3.60	0.50	Good
8	Feedback	3.53	0.51	Good
	Summary	3.59	1.05	Good

#### Table 1. (Continued)

From table 1, that all 15 experts are consistent in evaluating the overall suitability of the model has suitability in a good level. ( $\overline{X} = 3.59$ , S.D. = 1.05).

#### 6.2 Discussion

The results showed that supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education has suitability in a good level. however the researcher has conducted a study of documents related research has process development and evaluation supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education was according to the review of documents and relevant literature from both within and outside the country on supply chain operation model in digital. [1],[2],[3],[4],[5],[9],[10].[11],[12],[13],[14],[15], [16].

#### 7. Recommendations

Supply chain operation model in digital for curriculum management base on Thailand qualification framework for higher education has suitability in a good level, it has not been actually implemented in any university. Therefore, if possible it should be implemented in some university. The feedback information from the implementation could be appropriately applied in actual work settings.

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