# Logistics Educational Needs for Logistics Undergraduate Program: A Case Study on the Malaysia Private Higher Education Institution

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## ABSTRACT

*This is a case study pertaining to logistics educational needs (LEN) for one Malaysia private higher education institution. The purpose of the study is to provide a perspective view pertaining LEN in an undergraduate logistics programmes from Malaysian logistics practitioners. It focuses on the perception concerning courses required in logistics programmes offered by this Malaysian private higher education institution. 13 respondents who were working in a logistics industry were participated in the study. The study aims to discover what is important across the constructs of courses in logistics program using an open-ended questionnaire. It deals with the exploratory approach to LEN and its relevancy in the present logistics curriculum. The findings show that 37 items were derived from the study and were grouped under knowledge, skills and working experience. The findings are considered to create an understanding to design future empirical study on LEN in the Malaysian undergraduate logistics programmes.*

**Keywords:** Case study, logistics educational needs, courses, skills, working experience

## INTRODUCTION

Curriculum on logistics education needs (LEN) has evolved from transportation to logistics and supply chain management. Logistics have been developing from the military logistics to physical distribution management (Gubbins, 1988), logistics functions (La Londe, 1994) and supply chain management (Lambert, Cooper &Pagh, 1998). The problem raises of what future logisticians need to learn and what education logistics programs offer have been of growing concern, not only for higher education institutional administrators, but also for scholars and logistics practitioners. Trunick (2006) clearly emphases that higher education institutions need to provide competence and marketable logistics programs. This is to ensure that graduates will be able to use their knowledge and skills in the logistics industry.

In order to explore the LEN in Malaysia, a study was conducted to explore thoughts from local logistician practitioners pertaining to an undergraduate logistics program from one private higher education institution. Views from logistics practitioners can provide LEN in terms of appropriate courses in the logistics programs. This is to ensure the learning outcomes for each courses contribute to knowledge required by the logistics industry (Dazmin& Halim, 2011). To understand whether the current and future undergraduate logistics program in the Malaysia private higher education institutions pace with the logistics industry, regular feedbacks from logistics practitioners on each of the logistics courses is a must (Gravier& Farris, 2008).These logistics practitioners will provide latest input regarding logistics knowledge and skills required by the higher education institutions which will then use these inputs in designing their logistics programs and curriculum. The importance of developing an effective logistics curriculum can be traced back from the previous literature



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(for examples see Gravier& Farris, 2008; Mohamed Syazwan & Dazmin, 2013). They emphasize the needs for current higher education institutions to revise their curriculum so that they can produce competent logistics graduates.

Malaysian higher education institutions need to have collaboration with logistics practitioners in order to design effective logistics programs (Dazmin, 2009). Good logistics curriculum can be achieve if these two parties working together to select courses or subjects that will contribute to competent logisticians in the future.

The purpose of this study is to provide perspectives from Malaysian logistics practitioners pertaining to LEN. This study tries to discover what is important across the constructs of courses in undergraduate logistics program in a private higher education institution in Malaysia. It deals with the exploratory approach to LEN and its relevancy in the present logistics curriculum.

## LITERATURE REVIEW

Previous studies have emphasized on the lacking of relevancy between actual working practice and curriculum in academic logistics programmes. Lancioni, Forman and Smith (2001) have studied a comparative logistics programs in universities between the cross-functional discipline and the traditional curriculum structures. Their research showed that there is a trend of shifting from the traditional curriculum structures into the cross-functional discipline.

A study from Wu (2007) confirmed that logistics programmes at higher education institutions offer more non-logistics courses compare to courses which directly relate to logistics. In a related issue, there is a need for practitioners to become an academician so that the actual and recent knowledge and skills can be transferred to the students at higher education institution (Clinebell and Clinebell, 2008).

Aquino and Draper (2008) emphasized higher education institutions to design and offer accurate logistics curriculum in a logistics program that match with the current industrial needs to their logistics students. They believed that truly comprehensive programs in logistics and supply chain management would gain support from the logistics industry. Moreover, the partnership model (between higher education and logistics practitioners) would provide an access for logistics students to apply knowledge and skills in the real working environment. Thus, it is a starting point for reducing the talent gap.

Erturgut (2011) claimed that not only logistics graduates are able to work in various logistics related fields but also in other disciplines and fields as well. There are numerous challenges and issues faced by logistics higher education according to Lancioni, Forman and Smith (2001). Among the problems are; lack of trained and qualified faculty members to teach logistics, difficulties in integrating logistics subjects with existing syllabus, the resistance to acknowledge logistics as a respectable area in business and lesser recognition to publish in logistics or supply chain journals. In the case of Malasysia, presently the demand and recognition for logistics higher education need is growing (Dazmin, 2011; Dazmin, 2012).

## METHODOLOGY

The case study was conducted using 13 Malaysian logistics managers as respondent's inorder to seek their ideas about LEN. Their views were sought to describe suitable courses in undergraduate logistics programmes. An exploratory study would provide an advantage by seeking information from persons experienced in the area of study, by tapping into their collective memories and experiences (Cooper & Schindler, 2013).



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An appointment has been set up to meet the respondents respectively. They were then given a briefing about the objective of the meeting. Respondents were asked to contribute salient points related to the existing curriculum of an undergraduate logistics program. Each respondent received a list which included the existing subjects for an undergraduate logistics program. The list consisted of 37 subjects from year 1 to year 3. The researcher further explained the questionnaire briefly and then left it with the respondents to complete it within a time frame. Respondents were asked to assess each subject either to "Retain", "Revise" or "Remove". In addition to that, demographic questions were asked. This part contained questions covering position, working experience and type of company. The survey was conducted on a day during the weekday, from 3.00pm to 4.00pm.

## FINDINGS AND DISCUSSION

The objective of this study is to explore views on the existing undergraduate logistics program based on a perspective of Malaysian logistics practitioners. Their views were categorized qualitatively into either to retain, revise or remove certain subjects in the program. The results of this qualitative study may provide valuable inputs in developing a survey instrument for a quantitative study pertaining to LEN for logistics undergraduate program. Feedbacks from respondents as key informants in logistics indicated that the distribution of subjects offered in the program could be grouped under retain, revise and remove.

The responding logisticians in the study were eleven males (85 percent) and two females (15 percent).Majority of them occupied middle positions (85%). Only two (15 percent) respondents were top managers. The respondents' average of working experience was 21.3 years. Four (31 percent) of them worked in multinational logistics firms and the balance worked in local logistics firms.

The lists of subjects for retain, revise and remove from each respondent were organized in a table. Respondents had answered all the 37 subjects. Thus, there was no issue pertaining to the missing value in this study. Table 1 shows the listing of 37 subjects under the category of retain, revise or remove.

Referring to Table 1, respondents had emphasized on 37 subjects for undergraduate logistics programmes. 31 subjects obtained percentage more than 50 percent under the category of "Retain". Introduction to Logistics Management, Organizational Behaviour, Internship 2, Operational Research and Strategic Logistics Management obtained the highest rank (12, 92.3%). Subjects like Operation Management, Financial Management, Business Law, Air Transportation Management, Internship 3 and Industrial Relations were ranked the last six out of 31 (highest: 5, 38.5%; lowest:3, 23.1%).

Under the category of "Revise", 6 subjects (Industrial Relations, Business Law, Business Law, Internship 3, Air Transportation Management, Export Management and Practice and Financial Management) were ranked more than 50 percent for a revision (see Table 2). Respondents felt that there is a need to revise the contents of these subjects in order to match with the current and future demands in the logistics industry. The remaining of the subjects obtained low concern from the respondents for a revision purpose. In this case, the highest frequency was 5 (38.5% for Fundamentals of Marketing, Operation Management and IT Application in Logistics Operations) while the lowest frequency was 1 (7.7%) for Introduction to Logistics Management, Business Accounting, Organizational Behaviour, Managing People, Business Research Methods, Internship 2, Operations Research and Strategic Logistics Management).



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Table 3 reveals that Introduction to Logistics Management obtained the highest rank (3, 23.1%) followed by Fundamental of Marketing, Business Information System, University Life and Business Law – Malaysian Perspective (2, 15.4%) for removing them in the undergraduate logistics curriculum. Eight subjects (Microeconomics, Business Accounting, Organizational Behaviour, Macroeconomics, Business Law, Internship 1, Introduction to Industrial Management and Operations Management) were perceived by one respondent (7.7%) for the removal purpose. All respondents preferred the remaining of 25 subjects to be retained in the logistics program.

Many literatures in logistics education have emphasized the need for higher education institutions to review their logistics curriculum. This is to ensure that all logistics curricula match with the logistics industry needs. According to Bajada and Trayler (2013), every subject in a program must have a road map for student's learning. They added that the developing of an integrative curriculum is a must and needs to embed throughout the entire of the degree program. This present study has demonstrated the importance of reviewing undergraduate logistics program periodically. It is suggested that higher education institutions must perform this exercise annually.

Inputs from the logistics practitioners will help higher education institutions which offering an undergraduate logistics program develop an effective program that able to produce future competent logisticians (Wu, Huang, Goh & Hsieh, 2013). Logistics practitioners are more concern on the logistics curriculum that attribute to deal with globalization. According to Wu et al. (2013), logistics graduates need to be able to integrate, communicate, and analyze from an international perspective, perform financial analysis, maintain good industry and customer relations, exhibit strong people skills, stay healthy, and understand laws and regulations. It is suggested that any subjects in the logistics program which are not attribute to the above requirements must be revised or removed.

## CONCLUSION, IMPLICATIONS AND LIMITATIONS

This study indicated the possible relevance of each subjects in an undergraduate logistics program to be retained, revised or removed in order to meet the current and future LEN. Subjects offered in the program should be able to demonstrate learning outcomes in the form of knowledge and skills required by logistics practitioners.

In the future, quantitative comparative studies can be conducted to look into the significance difference between the retained, revised and removed subjects. This would further enhance the reliability of the current findings. Finally, this study has a limitation that should be acknowledged. The sample was taken from an association's contact list. There is no doubt that there are many Malaysian logistics practitioners than those in the list. Future research direction would be to replicate this study among Malaysian logisticians in the more large respondents before any generalization could be drawn.

Notwithstanding, this study has set a foundation for further quantitative research on Malaysia LEN. Expanding the research to capture views from other LEN's stakeholders such as academicians teaching logistics programs, logistics students, logistics professional bodies and Government agencies that are involved in logistics industry would provide more information of LEN in Malaysia. At the end of the day various factors from different perspectives will be blended in order to produce a competitive LEN in the logistics curriculum for the 21st century logisticians.



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**Table 1. Retain Category – Descending Order**

| *Subject* | *Retain* | *%* |
|---|---|---|
| Introduction to Logistics Management | 12 | 92.3 |
| Organizational Behavior | 12 | 92.3 |
| Internship 2 | 12 | 92.3 |
| Operations Research | 12 | 92.3 |
| Strategic Logistics Management | 12 | 92.3 |
| Business Law – Malaysian Perspective | 11 | 84.6 |
| Microeconomics | 11 | 84.6 |
| Business Accounting | 11 | 84.6 |
| Internship 1 | 11 | 84.6 |
| Business Research Methods | 11 | 84.6 |
| Business Supply Chain Management | 11 | 84.6 |
| Introduction to Industrial Management | 10 | 76.9 |
| Managing People | 10 | 76.9 |
| Statistics and Its Application | 10 | 76.9 |
| Quantitative Method for Logistician | 10 | 76.9 |
| Warehousing Management | 10 | 76.9 |
| Final Year Project A | 10 | 76.9 |
| International Business | 10 | 76.9 |
| Materials Management | 10 | 76.9 |
| Fundamentals of Management | 9 | 69.2 |
| University Life | 9 | 69.2 |
| Macroeconomics | 9 | 69.2 |
| Final Year Project B | 9 | 69.2 |
| Logistics Project Management | 9 | 69.2 |
| Fundamentals of Marketing | 8 | 61.5 |
| Business Information System | 8 | 61.5 |
| Land Transportation Management | 8 | 61.5 |
| IT Application in Logistics Operations | 8 | 61.5 |
| Maritime Transport | 7 | 53.8 |
| Strategic Distribution Management | 7 | 53.8 |
| Export Management and Practice | 6 | 46.2 |
| Operations Management | 5 | 38.5 |
| Financial Management | 5 | 38.5 |
| Business Law | 4 | 30.8 |
| Air Transportation Management | 4 | 30.8 |
| Internship 3 | 4 | 30.8 |
| Industrial Relations | 3 | 23.1 |

**Table 2. Revise Category – Descending Order**

| *Subject* | *Revise* | *%* |
|---|---|---|
| Industrial Relations | 10 | 76.9 |
| Business Law | 9 | 69.2 |
| Internship 3 | 9 | 69.2 |
| Air Transportation Management | 7 | 53.8 |
| Export Management and Practice | 7 | 53.8 |
| Financial Management | 6 | 46.2 |
| Fundamentals of Marketing | 5 | 38.5 |
| Operations Management | 5 | 38.5 |
| IT Application in Logistics Operations | 5 | 38.5 |
| Fundamentals of Management | 4 | 30.8 |
| Business Information System | 4 | 30.8 |
| Land Transportation Management | 4 | 30.8 |
| Maritime Transport | 4 | 30.8 |
| Final Year Project B | 4 | 30.8 |
| Logistics Project Management | 4 | 30.8 |
| Strategic Distribution Management | 4 | 30.8 |
| University Life | 3 | 23.1 |
| Macroeconomics | 3 | 23.1 |
| Introduction to Industrial Management | 3 | 23.1 |
| Statistics and Its Application | 3 | 23.1 |
| Final Year Project A | 3 | 23.1 |
| International Business | 3 | 23.1 |
| Materials Management | 3 | 23.1 |
| Business Law – Malaysian Perspective | 2 | 15.4 |
| Microeconomics | 2 | 15.4 |
| Internship 1 | 2 | 15.4 |
| Quantitative Method for Logistician | 2 | 15.4 |
| Warehousing Management | 2 | 15.4 |
| Business Supply Chain Management | 2 | 15.4 |
| Introduction to Logistics Management | 1 | 7.7 |
| Business Accounting | 1 | 7.7 |
| Organizational Behavior | 1 | 7.7 |
| Managing People | 1 | 7.7 |
| Business Research Methods | 1 | 7.7 |
| Internship 2 | 1 | 7.7 |
| Operations Research | 1 | 7.7 |
| Strategic Logistics Management | 1 | 7.7 |



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**Table 3. Remove Category – Descending Order**

| *Subject* | *Remove* | *%* |
|---|---|---|
| Introduction to Logistics Management | 3 | 23.1 |
| Fundamentals of Management | 2 | 15.4 |
| Fundamentals of Marketing | 2 | 15.4 |
| Business Information System | 2 | 15.4 |
| University Life | 2 | 15.4 |
| Business Law – Malaysian Perspective | 2 | 15.4 |
| Microeconomics | 1 | 7.7 |
| Business Accounting | 1 | 7.7 |
| Organizational Behavior | 1 | 7.7 |
| Macroeconomics | 1 | 7.7 |
| Business Law | 1 | 7.7 |
| Internship 1 | 1 | 7.7 |
| Introduction to Industrial Management | 1 | 7.7 |
| Operations Management | 1 | 7.7 |
| Air Transportation Management | 0 | 0 |
| Land Transportation Management | 0 | 0 |
| Managing People | 0 | 0 |
| Statistics and Its Application | 0 | 0 |
| Financial Management | 0 | 0 |
| Maritime Transport | 0 | 0 |
| Quantitative Method for Logistician | 0 | 0 |
| Warehousing Management | 0 | 0 |
| Business Research Methods | 0 | 0 |
| IT Application in Logistics Operations | 0 | 0 |
| Industrial Relations | 0 | 0 |
| Internship 2 | 0 | 0 |
| Final Year Project A | 0 | 0 |
| International Business | 0 | 0 |
| Operations Research | 0 | 0 |
| Business Supply Chain Management | 0 | 0 |
| Strategic Logistics Management | 0 | 0 |
| Final Year Project B | 0 | 0 |
| Logistics Project Management | 0 | 0 |
| Materials Management | 0 | 0 |
| Strategic Distribution Management | 0 | 0 |
| Export Management and Practice | 0 | 0 |
| Internship 3 | 0 | 0 |

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