Macrothink Institute™

International Journal of Learning & Development
ISSN 2164-4063
2012, Vol. 2, No. 3

Oliva Model in Malaysian Logistics Curriculum: A Conceptual Framework Paper

Dazmin Daud
(Corresponding Author)
Faculty of Business and Information Science, UCSI University
1, Jalan Menara Gading, UCSI Heights, 56000 Kuala Lumpur, Malaysia
Tel: +6-03-91018880 E-mail: dazmindaud@ucsi.edu.my

Halim Ahmad
Faculty of Business, University Selangor
Shah Alam Campus, Section 7, 40000 Shah Alam, Selangor, Malaysia
Tel: +6-03-55223532 E-mail: ugsm@unisel.edu.my

Hazrina Johari
Faculty of Business and Information Science, UCSI University
1, Jalan Menara Gading, UCSI Heights, 56000 Kuala Lumpur, Malaysia
Tel: +6-03-91018880 E-mail: hazrina@ucsi.edu.my

Accepted: May 11, 2012 Published: June 02, 2012

Doi:10.5296/ijld.v2i3.1884 URL: http://dx.doi.org/10.5296/ijld.v2i3.1884

Abstract

This paper proposes an attempt to set out a conceptual framework for the application of Oliva Model in logistics curriculum at Malaysian higher education institutions. The need for a conceptual framework was due to the lacking of literatures pertaining to Oliva Model in Malaysian logistics education; and thus requires future empirical studies. Two main issues are tackled: Oliva Model as a curriculum theory, and the need to study this Model on logistics curriculum. In this context, the paper elaborates the Oliva Model as a theoretical foundation for curriculum development in logistics programs. The designing and evaluating components in the Model are expected to provide logistics students with optimum knowledge both in logistics as well as non-logistics.

Key Words: Oliva curriculum model, logistics programmes, curriculum, Malaysian higher education institutions

INTRODUCTION

In his latest book, "*Developing the Curriculum*", 7th edition, Oliva (2009) discussed in detail about Oliva Model and its relationship with curriculum. The Model is based on previous curriculum models such as the Tyler Model (based on student, society and subject matter as sources); the Saylor, Alexander and Lewis Model (based on goals and objectives, curriculum designing, curriculum implementation, and curriculum evaluation); and the Taba Model (based on producing pilot, tertiary experimental units, revising and consolidating, developing a framework, and installing and disseminating new units). Oliva further stressed that the Oliva Model is based on the 'needs from student and society'.

In conjunction with the 'needs from student and society', the Model is expected to provide a foundation for an understanding of its contribution to logistics curriculum. Theoretically, the design and development of curriculum in logistics programs are based on constructive inputs from logistics practitioners. Logistics practitioners can assist academicians and academic administrators by providing important items that may salient for logistics students in order for them to acquire competency through effective and comprehensive logistics curriculum. It is therefore a need for the above stakeholders to have a consensus on designing viable as well as reliable logistics programmes at higher education institutions.

A salient issue that relates to academic programmes is the gap between theory in class and application during work. There are studies regarding how academic courses at higher education institutions lack of relevancy in terms of the actual working practice and application (see Pteffer & Fong, 2002; Mohamad Hanapi, Zahiruddin & Mohd Shah, 2003; Nagalingam & Sivanand, 2004; Rohaizat, 2004; Bennis & O'Toole, 2005; Clinebell & Clinebell, 2008; Lang, 2009; Bettinger & Long, 2009). In addition, studies by Murname, Willett, Duhaldeborde, and Levy, (1995); and Lee and Lee (2009) had established the relationship between academic programmes at higher education institutions and high demand on graduates by employers. Toward certain point, Clinebell and Clinebell (2008) had emphasized the need for critical courses offered to be thought by actual and experienced practitioners. They called these practitioners "executive professors" who can deliver knowledge in the course contents to match with the current educational needs of the industry.

The purpose of this report is to discuss the concept of Oliva Model in designing logistics curriculum at higher education institutions. Inputs as a constructive feedback from logistics practitioners are underlying facet in the research into these areas. This report begins with a brief review of the background of the need for logistics practitioners to participate in logistics curriculum development. It is followed by review of the literature on logistics curriculum. Next, concepts pertaining to Oliva Model as a curriculum theory and its application in the logistics curriculum are discussed. Finally, the possibility of generating a need to conduct studies between Oliva Model and logistics curriculum at higher education institutions in Malaysia is emphasized.

LOGISTICS CURRICULUM

Curriculum can be defined in many ways: as the teaching and learning of pedagogy and of subject-matter content (Adler, 1991); as a plan, in terms of experiences or as a field of study that relates to subject matter and grade levels (Lunenburg & Ornstein, 2000); as the educative experiences learners have in an educational planned program based on a framework of theory and research, past and present professional practice, and the changing needs of society (Parkay, Anctil & Hass, 2006); as a program; courses or a discipline (a subject of study) based on an organized set of principles, a body of knowledge and skills, and theoreticians and practitioners (Oliva, 2009).

The importance of developing effective logistics curriculum in higher education institutions can be traced back from the views of Berkovski and Gottschalk (1997); Closs (2000); and Richardson (2002). They emphasized the need for the current higher education institutions to revise their curriculum. This revision was necessary so that higher education institutions could be able to produce logistics graduates with knowledge and skills for the challenges and demands when they are working in the future. In addition to the above issue, there are drawbacks regarding logistics as a primary discipline (Stock, 1997). Stock argued that it is because logistics does not have rich heritage of theory development and empirical research compared to older academic disciplines such as anthropology, philosophy, psychology and sociology. Stock further discussed how logistics discipline outgrew from marketing, management and engineering disciplines.

There is an issue in the case where logistics course is overshadowed by other disciplines. Students exhibit significantly lower familiarity with logistics discipline when compared to other business disciplines particularly with marketing, accounting and management (Knemeyer & Murphy, 2004). The finding from Knemeyer and Murphy's study demonstrated that the students are relatively unfamiliar with the concept of logistics as a career choice.

There are researchers who studied a comparison of logistics courses between cross-functional-content and sole-logistics-functions-content. For example, Lancioni, Forman, and Smith (2001) studied and compared logistics programs in higher education institutions based on cross-functional courses and traditional course structures. They found that there is a trend shift from the traditional courses to the cross-functional courses offered. Another example is by Wu (2007). Wu had provided the first empirical analysis of logistics course offered worldwide and had described the overall picture of contemporary logistics curricula from an international perspective. His finding suggested that the design of logistics courses for undergraduate students tends to be function-oriented.

OLIVA MODEL AS A CURRICULUM THEORY

The Oliva Model is the extension from the Saylor, Alexander, Lewis (SAL) and the context, input, process, product (CIPP) Models (Oliva, 2009). The SAL Model was developed by J. Galen Saylor, William M. Alexander and Arthur J. Lewis in 1981 while the CIPP Model was developed in 1971 by Daniel L. Stufflebeam. Oliva adds eight concepts of curriculum construction: i) scope, ii) relevance, iii) balance, iv) integration, v) sequence, vi) continuity, vii) articulation, and viii) transferability. In his book, Oliva combines the SAL and CIPP Models to develop Oliva Model. He further has discussed the limitation of these two Models.

The SAL Model only emphasized on five components: i) the goals, ii) sub goals, and objectives; iii) the program on education in its totality; iv) the specific segments of the education program; v) instruction; and vi) the evaluation program (Oliva, 2009). On the other hand, the CIPP Model only combined the components of evaluation process, classes of change settings, types of evaluation (context, input, process, and product) and types of decisions (planning, structuring, implementing, and recycling) (Stufflebeam, 1971).

The Oliva Model consists of twelve components: i) statement of aims and philosophy of education, ii) specification of needs, iii) curriculum goals, iv) curriculum objectives, v) organization and implementation of the curriculum, vi) specification of instructional goals, vii) specification of instructional objectives, viii) selection of strategies, ix) preliminary and final selection of evaluation techniques, x) implementation of strategies, xi) evaluation of instruction, and xii) evaluation of the curriculum (Oliva, 2009). Oliva further explained that the Model can be used in three different ways:

1. The Model offers a process for the complete development of a curriculum;
2. A faculty may focus on the curricular components of the Model to make programmatic decisions; and
3. Instructional components development.

APPLICATION OF OLIVA MODEL IN CURRICULUM

Previous studies had used the Oliva Model to study curriculum designing (Coverdale, Roberts & Louie, 2008; Lee, 2006; OØDonoghue, 2000; Kumari, 1998); and curriculum framework (Jooste, 2007). Furthermore, previous studies had shown the application of this Model in programs (Pryor, Sloan & Amobi, 2007), knowledge (Tembo, 2002), competency (Rennert-Ariev, 2008), and needs (Rupainienė, 2006) in conjunction with educational needs.

Pryor, Sloan and Amobi (2007) investigated three instructors' program-course methods developed in order to help pre-service teachers for a better understanding of their philosophic foundations of education. Their study was to observe the impact of teaching philosophical approaches on pre-service teachers' coherence-non-coherence perspectives. The theoretical basis of their study was based on the educational theories including a view from the Oliva

Model. The objective of the study was to determine the relationship between philosophical orientations and educational practice. Their instruments called the '105-item Philosophy of Education Scale' (POES) in the research were partly based on Oliva's research. Their findings suggested that more importance should be placed on developing course strategies that enhance the opportunity for pre-service teachers. The findings of the study were to portray emerging beliefs about pre-service teachers in their early experiences in schools.

Meanwhile, Tembo (2002) used Oliva's views in relation to knowledge acquisition in his attempt to develop broad and balance physical education curriculum in Malawi, Africa. His framework consisted of teaching and learning topics in physical education, in such a way that every school child will have an opportunity to participate for enjoyment, knowledge and skill acquisition for personal and national benefit. He further stressed that "curriculum development" or "curriculum design" is intended to impart knowledge or education. Therefore, physical education should not only be a subject for learning skills and for recreational purposes but also for gaining experience and knowledge from which the children can benefit both during their time and later in life. His theory supported Oliva's views where the experience and knowledge gained must address the needs of the individual or community and universal goals.

In his qualitative study, Rennert-Ariev (2008) described and analyzed a "performance-based" teacher education program at a university. He compared "formal curriculum" based on the Oliva Model and "hidden curriculum". He described "Oliva's formal curriculum" as a plan or program for all experiences which the learner encounters under the direction of the school. The plan was represented by standard documents, course syllabi, textbooks, and assignments, and needed to be carefully examined to understand the nature of any program. The study was aimed at understanding the "hidden" curricular messages within the program and the ways that these messages interacted with the intended learning outcomes by answering questions that tested their competency. The finding revealed that formal and hidden curriculum contributes to competency. In supporting Rennert-Ariev's findings, Coverdale, Roberts and Louie (2008) stressed that the Model had set guiding principles in designing a curriculum in order to assess competency from the students.

Rupainienė (2006) emphasized the application of cubic curriculum based on several curriculum models, including the Oliva Model, in terms of their concepts, characteristics, planning, development, and constructing. He explained the inevitability of development of school curriculum due to the requirements of contemporary context in the new learning paradigm and the concept of life long learning. His research article stressed the role of partnership in a primary school community that took responsibility to plan and to materialize curriculum design according to the model of cubic curriculum. Before he explained the needs of cubic curriculum, he firstly summarized different aspects of curriculum based on several curriculum theories including the Oliva Model. The application of the Model in his study, therefore partly contributed to the three components of cubic curriculum: i) subject matter; ii) cross-curricular themes and issues; and iii) different methods of teaching and learning. Rupainienė believed that the curriculum will enable future citizens to have more success in life

in the society of knowledge and information which he perceived so uncertain and complex from today's point of view.

Figure 1 shows the twelve components of Oliva Model. In this Model, Oliva pointed out that it is important to determine whether the curriculum goals and objectives are being successfully carried out or not. The Model combines a scheme for curriculum development (components 1 to 4 and 12) and a design for construction (components 5 to 11). The important features are the feedback lines that cycle back from the evaluation of instruction to the instructional goals (see Figure 1). These lines indicate the necessity for continuous revision of the components. Table 1 summarizes the components.

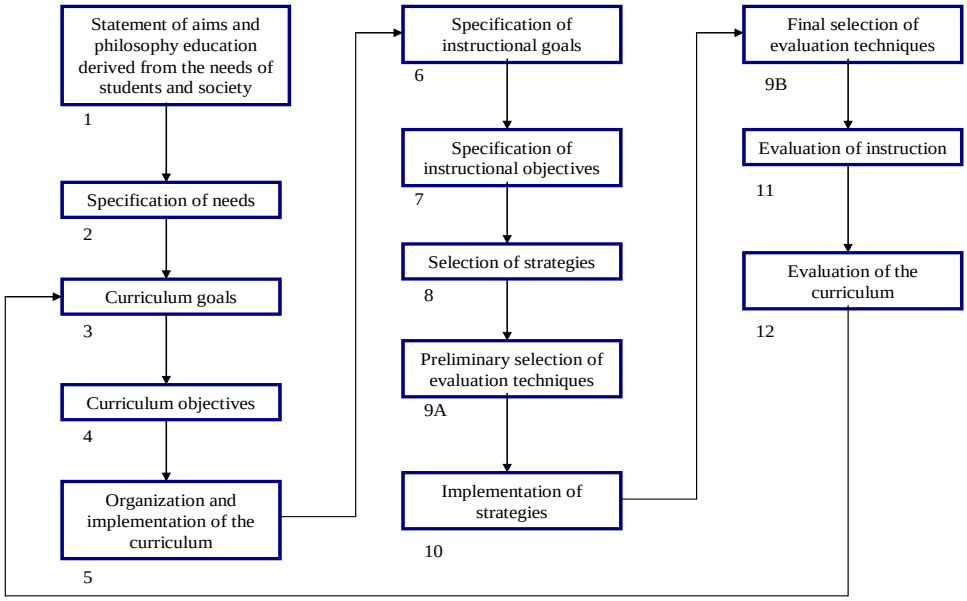

Figure 1: The Oliva Model for Curriculum with Evaluation (Feedback) Lines

In addition, Oliva emphasized that curriculum planners must be able to provide answers to these issues:

1. Whether the curriculum is functioning while in operation;
2. If the best material is being used and following the best methods; and
3. Whether the programs are cost-effective – whether stakeholders are getting most for the money spent.

THE NEED TO SUTDY OLIVA MODEL ON LOGISTICS CURRICULUM IN MALAYSIA

Logistics practitioners provide useful inputs in conjunction with the knowledge and competency required by future logistics practitioners. These inputs are used by logistics educators as well as higher education institutions that offer undergraduate logistics programs to design logistics curriculum to match with the needs of the logistics industry. Previous studies have provided a support regarding the importance of practitioners input towards academic curriculum (see Hubbard & Norman, 2007; Way, 2002; Thacker, 2002).

In Malaysia, there were studies that partly apply Oliva Model but they were not related logistics. For example, Maimun, Ramlee and Muhammad Hasyim (2007) studied curriculum innovation towards competency at the Indonesian School of Kuala Lumpur by using a case study method. The findings revealed that respondents have had limited exposure to the competency-based curriculum and the training was not effective. In another example, Zamri, Lasan and Nik Mohd. Rahimi (2009) conducted a study to investigate the perceptions of students at private higher learning institution in Sarawak on the teaching of Malay language. Their research framework was partly developed from the Oliva Model. Their findings indicated that there were no significant differences between the perceptions of Malay and non-Malay students on the teaching of the Malay language. Therefore, lacking of literatures pertaining to Oliva Model in Malaysian logistics education requires future empirical studies.

A proposed study should attempt to use the Oliva Model which emphasizes the importance of courses development in logistics programs based on perspectives of logistics practitioners. Previous researchers have used this Model for other disciplines but not in logistics curriculum development and designing at higher education institutions (see Coverdale, Roberts & Louie, 2008; Lee, 2006; OØDonoghue, 2000; Kumari, 1998; Jooste, 2007; Pryor, Sloan & Amobi, 2007; Tembo, 2002; Rennert-Ariev, 2008; Rupainienė, 2006). Theoretically, with the aid of logistics practitioners to provide salient inputs as part of the feedback based on the Oliva Model, curriculum design and development in logistics programs will become more valid and reliable.

Logistics practitioners provide useful inputs in conjunction with the knowledge and competency required by future logistics practitioners. These inputs are used by logistics educators as well as higher education institutions that offer undergraduate logistics programs to design logistics curriculum to match with the needs of the logistics industry. Previous studies have provided a support regarding the importance of practitioners input towards academic curriculum (see Hubbard & Norman, 2007; Way, 2002; Thacker, 2002).

The design and selection of logistics programme must match with the information derived from these logistics practitioners. Oliva emphasized the importance of curriculum evaluation through his writings:

"*Evaluation is a continuous process by which data are gathered and judgments made for the purpose of improving a system. Thorough evaluation is essential to curriculum developments. Evaluation is perceived as a process of making judgments, whereas research is perceived as the process of gathering data as bases for judgments*" (Oliva, 2009, pp. 449-450).

Figure 2 shows the application of Oliva Model in theoretical framework.

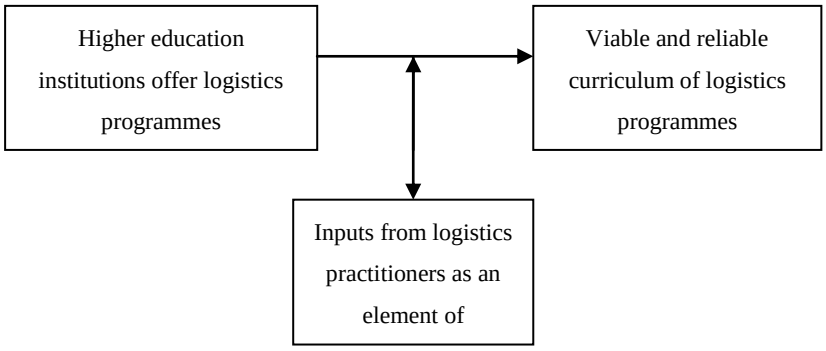

Figure 2: Relationship between Oliva Model and Study's Conceptual Framework

Table 2: A Summary of the Components in Oliva Model

Component	Description
1	Curriculum developers state the aims of education and their philosophical and psychological principles. These aims are beliefs that are derived from the needs of a society.
2	An analysis of the needs of the community in which the learning center is located, the needs of students served in that community, and the exigencies (demands) of the subject matter that will be taught in the given learning center. This component also introduces the concept of needs of particular students in particular localities, because the needs of students in particular communities are not always the same as the general needs of students throughout a society.
3 and 4	These components describe for specifying curricular goals and objectives

	based on the aims, beliefs, and needs specified in components 1 and 2.
5	The tasks of this component are to organize and implement the curriculum and to formulate and establish the structure by which the curriculum will be organized. Part of the findings in this study is to identify the components of knowledge acquired for students. Future curriculum design for the curriculum must include inputs from various stakeholders such as practitioners, academicians, professional bodies, and the Government *Note: the inputs from the logistics practitioners are use as part of the curriculum design.*
6 and 7	In these components, an increasing level of specification is sought. Instructional goals and objectives are stated for each level and subject.
8	Implementation of effective instructional strategies for usage with students in the classroom.
9	The curriculum planner thinks ahead and begins to consider ways he or she will assess student achievement.
10	The implementation of instructional strategies. The instructional phase component provides the planner with the opportunity to refine, add to, and complete the selection of means to evaluate student performance.
11	Evaluating instruction is carried out.
12	The component completes the cycle with evaluation not of the student or the teacher but rather of the curricular program.

Source: Oliva (2009), pp.137-141.

SUMMARY

In summary, the Oliva Model can assist higher education institutions conceptualize the process of designing effective logistics program by showing certain principles and procedures. The designing and the evaluating of logistics programs based on this Model is hoped to ensure students who are taking logistics programmes at HEIs acquire optimum knowledge in logistics functions and knowledge in non logistics functions.

Furthermore, courses are part of the curriculum in logistics programs. The course must be able to facilitate and help students acquire knowledge and skills. The courses must enable logistics students to develop skills when using the knowledge they have acquired in the program in order to become a competent logistician.

REFERENCES

Adler, S.A. (1991). The education of social studies teachers. In J.P. Shaver (ed.), *Handbook of Research on Social Studies Teaching and Learning*. New York: Macmillan Publishing Company, pp. 210-221.

Bennis, W.G. & O'Toole, J. (2005). How business schools lost their way. *Harvard Business Review, 83*(5), 96-104.

Berkovski, B. & Gottschalk, C.M. (1997). Strengthening human resources for new and renewable energy technologies of the 21st century. *Renewable Energy, 10*(2/3), 441-450.

Bettinger, E.P. & Long, B.T. (2009). Addressing the needs of underprepared students in higher education: Does college remediation work? *The Journal of Human Resources, 44*(3), 732-771.

Clinebell, S.K. & Clinebell, J.M. (2008). The tension in business education between academic rigor and real-world relevance: The role of executive professors. *Academy of Management Learning & Education, 7*(1), 99-107.

Closs, D.J. (2000). Preface. *Journal of Business Logistics, 21*(1), i-iii.

Coverdale, J.H., Roberts, L.W., & Louie, A.K. (2008). Teaching evidence-based psychiatry to residents and fellows: Developing the curriculum. *Academic Psychiatry, 32*(6), 453-457.

Hubbard, R. & Norman, A.T. (2007). What impact has practitioner research had in the marketing academy? *Management Research News, 30*(1), 25-33.

Jooste, S. (2007). *A curriculum framework for continuing professional development in culinary studies*. Unpublished master dissertation, Faculty of Education, University of Stellenbosch, South Africa.

Knemeyer, A.M., & Murphy, P.R. (2004). Promoting the value of logistics to future business leaders. *International Journal of Physical Distribution & Logistics Management, 34*(10), 775-792.

Kumari, S. (1998). Teaching with the Internet. *Journal of Information Technology for Teacher Education, 7*(3), 363-377.

Lancioni, R., Forman, H., & Smith, M. (2001a). Logistics programs in universities: Stovepipe vs cross disciplinary. *International Journal of Physical Distribution & Logistics Management, 31*(1), 53-64.

Lang, M. (2009). Conflict management: A gap in business curricula. *Journal of Education for Business, 84*(4), 240-245.

Lee, B.B. & Lee, J. (2009). Mathematical content of curricula and beginning salaries of

graduating students. *Journal of Education for Business, 84*(6), 332-338.

Lee, W.O. (2006). *Tensions and contentions in the development of citizenship curriculum in Asian countries.* A keynote address presented at the CIZED International Conference, Oriel College, Oxford.

Lunenburg, F.C. & Ornstein, A.C. (2000). *Educational Administration: Concepts and Practices.* Belmont: Wadsworth.

Maimun Aqsha Lubis, Ramlee Mustapha & Muhammad Hasyim Mustamin (2007). Persepsi guru dan pelajar terhadap kurikulum berasas kompetensi. *Jurnal Pendidikan, 27*(1), 119-134.

Mohamad Hanapi, M., Zahiruddin, G. & Mohd Shah, K. (2003). The development of global education in Malaysia: Strategies for internationalization. *Malaysian Management Review, 38*(2), 75-86.

Murnane, R. J., Willett, J. B., Duhaldeborde, Y., & Levy, F. (1995). The growing importance of cognitive skills in wage determination. *Review of Economics and Statistics, 77*(2), 251–266.

Nagalingam, K. & Sivanand, C.N. (2004). Comparative analysis of students' satisfaction in public and private universities in Malaysia. *Malaysian Management Review, 39*(2), 65-77.

Oliva, P.F. (2009). *Developing the Curriculum* (7th ed.). Boston: Pearson.

OØDonoghue, P. (2000). *Designing a multidisciplinary preclinical subject on the ecology of disease using alignment models*. Paper presented at the conference of the Effective Teaching and Learning at University, Duchesne College, The University of Queensland, and Brisbane.

Parkay, F.W., Anctil, E.J., & Hass, G. (2006). *Curriculum Planning: A Contemporary Approach* (8th ed.). Boston: Pearson.

Pryor, C.R., Sloan, K., & Amobi, F. (2007). Three professors' teaching philosophy of education: Strategies and considerations for undergraduate courses. *The Journal of Scholarship of Teaching and Learning, 7*(1), 77-101.

Pteffer, J. & Fong, C.T. (2002). The end of business schools? Less success than meets the eye. *Academy of Management Learning & Education, 1*(1). 78-95.

Rennert-Ariev, P. (2008). The hidden curriculum of performance-based teacher education. *Teachers College Record, 110*(1), 105-138.

Richardson, H.L. (2002). Get closer to logistics education. *Transportation & Distribution, 43*(10), 58-64.

Rohaizat, B. (2004). Identifying Needs and Wants of University Students in Malaysia.

Malaysian Management Review, 39(2), 59-64.

Rupainienė, V. (2006). Initiation of cubic curriculum by primary school community: Possible barriers? *Social Sciences, 51*(1), 41-51.

Stock, J.R. (1997). Applying theories from other disciplines to logistics. *International Journal of Physical Distribution & Logistics Management, 27*(9/10), 515-539.

Stufflebeam, D.L. (1971). The relevance of the CIPP evaluation model for educational accountability. *Journal of Research and Development in Education, 5*(1), 19-25.

Tembo, M.J. (2002). *A physical education curriculum plan for Malawi*. Unpublished doctoral dissertation, Faculty of the Virginia Polytechnic Institute and State University, United States.

Thacker, R.A. (2002). Revising the HR curriculum: an academic/practitioner partnership. *Education + Training, 44*(1), 31-39.

Way, P.K. (2002). HR/IR professionals' educational needs and master's program curricula. *Human Resource Management Review, 12*(4), 471-489.

Wu, Y. J. (2007). Contemporary logistics education: An international perspective. *International Journal of Physical Distribution & Logistics Management, 37*(7), 504-528.

Zamri, M., Lasan, C. & Nik Mohd. Rahimi, N.Y. (2009). Pengajaran dan pembelajaran bahasa Melayu di institusi pendidikan tinggi swasta di negeri Sarawak. *ASEAN Journal of Teaching & Learning in Higher Education, 1*(1), 8-25.