

**A MODEL OF COOPERATION BETWEEN AN EDUCATION INSTITUTE  
AND ENTREPRENEURS AFFECTING EDUCATION MANAGEMENT OF  
DEPARTMENT OF HOSPITALITY, FACULTY  
OF LIBERAL ARTS, RAJAMANGALA UNIVERSITY OF TECHNOLOGY  
KRUNGTHEP, BANGKOK, THAILAND.**

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**ABSTRACT**

The purpose of this study was to develop a model of cooperation between an education institute, i.e., Department of Hospitality, Faculty of Liberal Arts, Rajamangala University of Technology Krungthep (RMUTK), Bangkok, Thailand and tourism entrepreneurs in the area of education management. Eighty participants consisted of administrators, instructors, and entrepreneurs were randomly selected by Krejcie and Morgan table. The constructed questionnaire was utilized to collect data from the selected participants from Department of Hospitality, Faculty of Liberal Arts, Rajamangala University of Technology Krungthep and entrepreneurs. The data was analyzed by using values of mean and standard deviation. The consistency of empirical evidence was tested using several tests, namely, chi-square ( $\chi^2$ ), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and root mean squared residual (RMR). Results showed that the cooperation between education institutes and entrepreneurs affected the education management at a moderate level. Those factors that affecting the education management were associated with various values, namely, empirical data ( $\chi^2$ ) = 386.12, df = 236, p-value = 0.003, goodness of fit index (GFI = 0.91), adjusted goodness of fit index (AGFI) = 0.90, and root mean squared residual (RMR) = 0.042. Factors that affected the cooperation in education management between an education institute and entrepreneurs were ranked third from the top rank factors, namely, technology transfer, administration, and planning, respectively.

**Keywords:** A model of cooperation, education institute, entrepreneurs, education management.

## INTRODUCTION

Presently, tourism contributes significantly to the gross domestic product (GDP) of Thailand. It can be measured in terms of the revenue generated by tourists. Employment is a domestic and international significant factor in the industry, particularly in the hotel and restaurant sectors. While the business generated by tourists is crucial to many hospitalities, restaurants, travel services and entertainment facilities, it does not account for all the business of these sectors and in some regions of the country but it will make up very little of the activity. It has been shown in 2010 that tourism

contributed around 938,700 million bath gained to Thailand's economy. It has been documented that around 500,000 persons were required while around 36,000 persons were needed in tourism business, especially in the hospitality and restaurant sector in the same year.

Tourism industry becomes the second rank of the national incomes after electronic devices export; however, the rapid growth of labor reveals that it requires 400,000 people in 1991 to 800,000 people in 2003. It is quite obvious that tourism industry plays a vial role in country development, as shown in Table 1.

**Table 1.** Labor needs in service industry during 2004-2009.

Industries	Year					
	2004	2005	2006	2007	2008	2009
	Number of personnel, 1: 1,000 persons					
Hospitalities	198.28	207.67	217.46	227.68	238.95	250.13
Restaurants	195.71	204.98	214.65	224.73	235.86	246.89
Computers	12.33	12.92	13.52	14.16	14.86	15.56
Tourism business	28.86	30.23	31.65	33.14	34.78	36.41
Services	407.31	426.60	446.71	467.70	490.86	513.82
<b>Total</b>	<b>842.49</b>	<b>882.39</b>	<b>923.99</b>	<b>967.41</b>	<b>1,015.31</b>	<b>1,062.80</b>

(Source: Ministry of Tourism and Sports, 2009.)

The tourism industry consisted of a number of different industries, such as the travel industry, hospitalities and catering, retailing and entertainment providing the services to tourists. It requires highly trained personnel that favor the cooperation between education institutes and entrepreneurs both of government and private sectors where they work cooperatively to enhance and produce the qualitative graduates relevant to the needs of the hospitality industry and service market. This has been implemented in the 9<sup>th</sup> and 10<sup>th</sup> plans of Economics and Social Planning Development of the Nation as well as put it into tourism strategy during 2004-2010.

In order to become the tourism center of Asia in 2008, enhancing and developing the quality of the students concerned the good qualitative labor and professional as well as international standard (Luxasanavisit, 2007).

Department of Hospitality, Faculty of Liberal Arts, Rajamangala University of Technology Krungthep has offered the curriculum program of tourism industry since 1969, which managed and maintained the qualities of the education program at the higher education level as well as provided task administrative strategy for the better effectiveness (Songthanapitak, 2005), and responded to the entrepreneur'

s requirement (Tourism Council of Thailand, 2003). Department of Hospitality has cooperated with Oriental Hotel Thailand to co-work in training students' skills since 2002. The cooperation in management of the teaching-learning curriculum has been assisted from entrepreneurs in term of curricular activities, namely, food and beverages, housekeeping, front office, respectively. The main objective of the activities is aimed to develop students to be aware of hospitality structure, hospitality tasks, services in Food and Beverage Department, as well as English in hospitality area, etc. Students are mainly focused in practicing after-classes hours, which resulting in enhancing them to experience the real situation before entering into the labor market. However, it was found that the present graduate of the university was not able to response to the need of the enterprises. Hence, the specific objectives of this study were aimed at exploring the cooperation between an education institute, Department of Hospitality, Faculty of Liberal Arts, RMUTK and entrepreneurs in education management to construct and test a model of cooperation, which led to a developed model.

## RESEARCH METHODOLOGY

### Scope of the study

#### Population and sample

The population represents 100 personnel who currently work as education administrators, lecturers, and entrepreneurs. A total of 80 participants from the population of 100 personnel listed in 2011 were selected by Krejcie and Morgan's table (Krejcie and Morgan, 1970).

#### Variables

Variables refer to the cooperative activities between personnel in the education institute and entrepreneurs in education management. Those variables used in this study were planning and administrating, investment, cooperative working, technology transfer, and follow up.

The variable dealing with planning and administrating was emphasized on the cooperation with enterprises in planning and managing in order to achieve educational goal as described by Mondy

et al. (1999).

The variable concerning the investment was considered on the cooperation with enterprises in investment, allocating fund and equipments between an educational institute and enterprises (Aupakaew, 2010).

The variable that dealing with cooperative working was emphasized on the co-operative work in practicing at the hotels under international benchmark according to the integrated knowledge and concerns, which has been well documented in the website of Northern Support and Development Vocational Education Center (NSDV) (<http://www.nsdv.go.th/pr/dvt/dutycompany.htm>).

According to the variable dealing with the technology transfer, the enterprises select the appropriate ways and means to transfer knowledge and experiences to meet the needs of educational institutes, which enterprises could apply such knowledge to gain the better achievement (Hargadon, 2003).

In terms of the follow up, this variable was emphasized on the co-operation in managing the evaluation and assessment, including reporting it (Stufflebeam, 1989).

### Research framework

Since this study was aimed to develop the model of cooperation between personnel in an education institute, i.e., Department of Hospitality, Faculty of Liberal Arts, RMUTK and entrepreneurs working on education management, the constructed model was based on the consistency of empirical evidence. The hypothesis was the empirical data of cooperation between an education institute and entrepreneurs affecting education management of Department of Hospitality. The components of cooperation were consisted of several factors, namely, planning and administrating, investment, cooperative working, technology transfer, and follow up, were used in the development of the model.

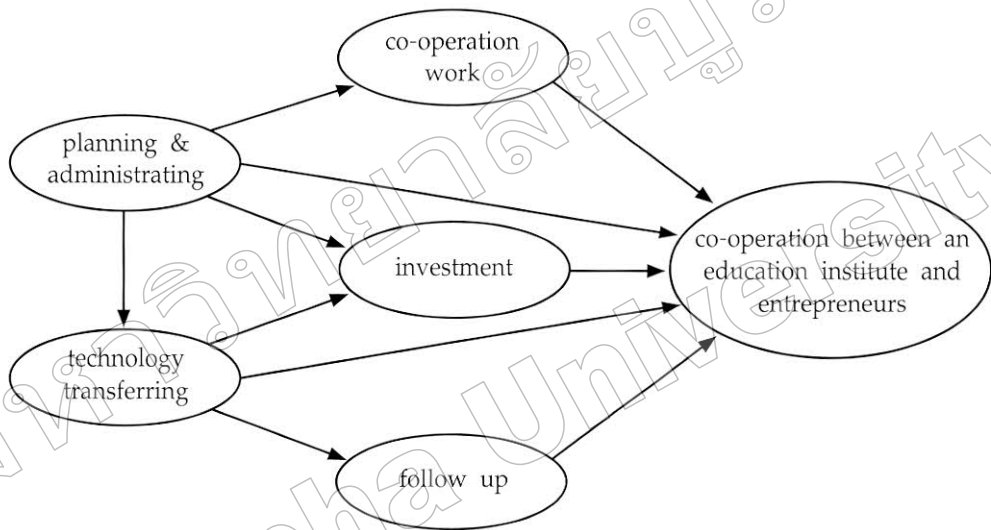
### Instrument

The questionnaire was constructed, using the five-point Likert scale. The constructed questionnaire was done in a consequence manner, namely, studying

the concepts, theories, and researches related to the activities of cooperation between an education institute and entrepreneurs; developed the questionnaire that based on the operational definitions of the factors affecting cooperation, and submitted the lists of questions for checking the face validity of the questions. The questionnaire was subsequently submitted to five professional experts to evaluate the content validity against the index of item objective congruence (IOC), where the experts gave com-

ments for the modification of the questions. The questionnaire was modified according to the suggestions of those five experts in the related field, and was subsequently used in the first try out with a group of hotel administrators with similar characteristics to the population. An analysis of the data was done in order to find out the Internal Consistency Reliability by using Cronbach's Alpha = 0.92 (Cronbach, 1990).

The following figure illustrates the constructed preliminary model:



**Figure 1.** Schematic diagram shows a developed model of cooperation between an education institute, Department of Hospitality, Faculty of Liberal Arts, RMUTK and entrepreneurs in education management.

The collection of data was carried out by sending the requested letters to 80 hotel administrators to seek permission to collect the data during January 9 - 29, 2011. The self-administered questionnaire was sent with a stamped-return envelop to all of the participants. All returned questionnaires were checked for the completion of the information. The data were analyzed to test the consistency of empirical evidence with the constructed model using descriptive statistics, namely, mean and standard deviation. The constructed model was subsequently tested for its consistency with empirical evidence by using chi-square ( $\chi^2$ ), goodness of fit index (GFI),

adjusted goodness of fit index (AGFI), and root mean squared residual (RMR).

## RESULTS

A set of questionnaire derived from related theories and researches on the cooperation in education management relevant to the activities of Department of Hospitality, Faculty of Liberal Arts, RMUTK was constructed via rating scales of five levels, with the values of IOC index falling between 0.6-0.8, and 15 copies were tried out with personnel of selected entrepreneurs, while the other 15 copies were used with personnel of RMUTK.

The reliability of the questionnaire was found at 0.92. One hundred questionnaires were sent out to collect data and only 69 copies were returned.

The values of mean and standard deviation were estimated, and it was shown that the coopera-

tion between an education institute and entrepreneurs affected education management of Department of Hospitality, Faculty of Liberal Arts, RMUTK. Results are summarized in Table 2.

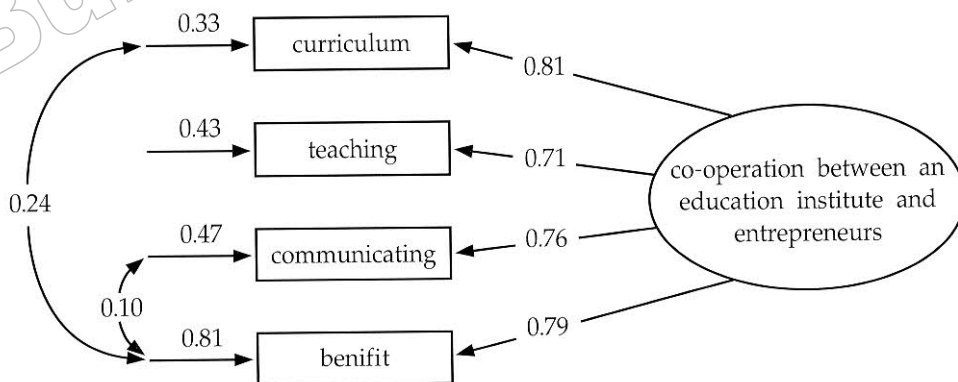
**Table 2.** The summary of values of mean and standard deviation scores of variables resulted from the analysis.

Cooperation between education institut and entrepreneurs	$\bar{X}$	S.D.	level	Ranks
Planning and administrating	3.44	0.65	moderate	2
Investment	3.25	0.64	moderate	5
Cooperation working	3.32	0.76	moderate	4
Technology transfer	3.46	0.80	moderate	1
Follow up	3.37	0.77	moderate	3
<b>Total</b>	<b>3.37</b>	<b>0.74</b>	<b>moderate</b>	

**Table 2** shows values of mean and standard deviation scores of variables resulted from the study on the cooperation between personnel in an education institute and the selected entrepreneurs in education management.

A confirmatory factor-analysis was employed to examine the constructed model of cooperation, and it was observed that a content factor was equal to 0.80. However, confirmatory factor-analysis showed that the technology transfer was weighed as the highest value at 0.86, and all other factors were significant at 0.05 level. The model values

were found at  $\chi^2 = 12.38$ ,  $P = 0.0145$ ,  $GFI = 0.97$ ,  $AGFI = 0.95$ ,  $RMR = 0.0099$ , respectively. The model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK was associated with the empirical data.



**Figure 2.** The factors' score of variables in capacity of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK.

The research for developing technique was utilized to develop a model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK. Five variables, planning and administrating, investment, cooperation working, technology transfer and follow up were emphasized. The model of cooperation between an education institute and entrepreneurs with education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK was chosen for the investigation. The afore-mentioned variables are latent variables, which are needed to be considered via the measurement model technique (Dusitsutirat, 2008) and LISREL program (Joreskog and Sorbom,

1996), and they were tried out three times to fit the model.

The structure analysis results revealed that the cooperation between an education institute and entrepreneurs with education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK was associated with the empirical data at  $\chi^2 = 386.12$ ,  $df = 236$   $p$ -value = 0.003, GFI = 0.91, AGFI = 0.90, and RMR = 0.042, which all of them were significant at 0.05 level. The results of the constructed model of cooperation between an education institute and entrepreneurs with education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK demonstrate that the model is indeed related to the empirical data (Figure 3).

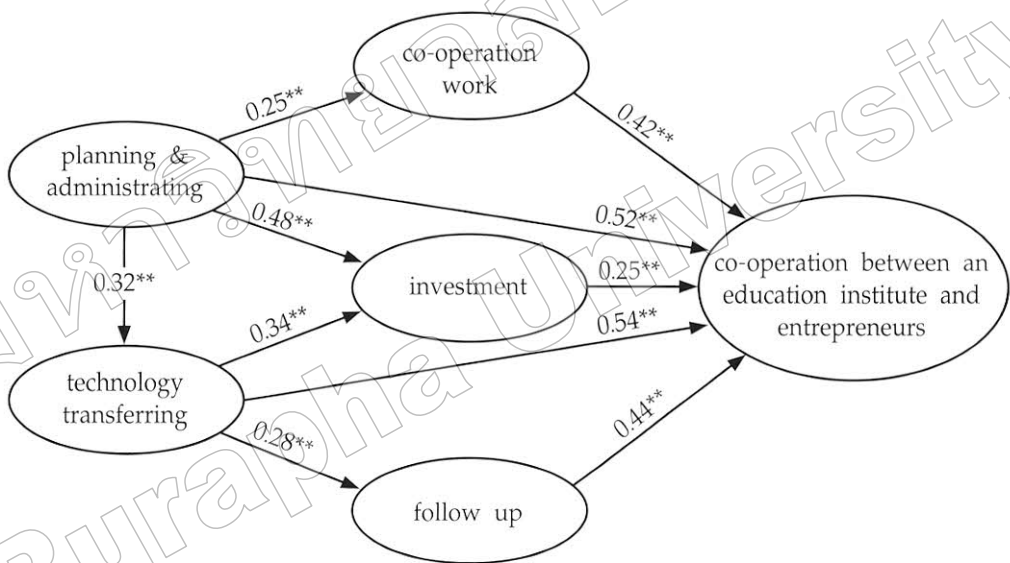


Figure 3. The final model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Liberal Arts at RMUTK.

## DISCUSSION AND CONCLUSION

The constructed model of cooperation between an education institute and entrepreneurs affecting education management of Department of Hospitality was consistent with empirical data. The hypothesis of this study was accepted via  $\chi^2$ , GFI, AGFI, and RMR.

The constructed model had been adjusted three times before the practical model was achieved. The model modification index was applied, and it

was found that the model of cooperation between an education institute and entrepreneurs affected the education management of Department of Hospitality. The cooperative activities were found to be linear and it was significantly correlated with the empirical evidence as seen from the following statistical values, namely,  $\chi^2 = 386.12$ ,  $df = 236$   $p$ -value = 0.003, GFI = 0.91, AGFI = 0.90, and RMR = 0.042, at the 0.05 level.

**Table 3.** Influences that affected the model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK.

Variables	Effect	Variables				
		Planning and administration	Investment	Cooperative working	Technology transfer	Follow up
Cooperative work between the education institute and entrepreneurs	Fixed effect	0.52**	0.25**	0.42**	0.54**	0.44**
	Random effect	-	0.08** 1	-	0.02**	0.01**
	Total effect	0.52**	0.33**	0.42**	0.56**	0.45**

\*\*p < 0.01

**Table 3** shows influences that affected the model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK, with ranking from the highest to the lowest, namely, technology transfer, administrating and planning, and follow up, respectively.

In conclusion, the constructed model of cooperation between the education institute and entrepreneurs could affect the education management of Department of Hospitality, and supports the research hypothesis formulated by the researcher. When individual variables were considered separately to find out the direct and indirect effects on RMUT model of cooperation between the education institute and entrepreneurs that affect the education management of Department of Hospitality, there are several aspects that are worth to discuss, namely, technology transfer, planning and administration, and follow up.

**Technology transfer** factor could affect the model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Liberal Arts at RMUTK at the highest level, and considered as the first priority, which this latent variable affected towards the model of cooperation between an education institute and entrepreneurs in education management. The transfer technology is considered as the crucial process in developing and promoting the university to the excellence and leadership under the cooperation with entrepreneurs in producing and services under

the support of Nonaka and Takeuchi (1995), and Argote et al. (2000). This is the significant part of teaching-learning activities, such as hospitality school project, and cooperative training, which the education institute relies on entrepreneurs. In the meantime, entrepreneurs could get qualified staff or students according to their requirements. This could lead to the development of the network for knowledge management.

**Planning and administrating** factor could affect towards the model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Liberal Arts at RMUTK at the higher level, and considered as the second rank, which this latent variable affected towards the model of cooperation between an education institute and entrepreneurs in education management for Department of Hospitality, Liberal Arts at RMUTK. Results of analysis showed that planning and administrating should cover the long length plan for the crucial factor in defining directions of the enterprises, strategic planning to future vision. Moreover, corporate-level strategic plan, business-level strategic plan, functional or product-level strategic plan as well as collective

mind to promote the cooperative work between an education institute and entrepreneurs in education management for Department of Hospitality, Faculty of Liberal Arts, RMUTK. This will lead to the application of the knowledge gained from business strategy, and lead to planning and administrating for the better effectiveness. In short, planning and administrating in hospitality techniques should be applied in teaching-learning curriculum of the university, and that both sides could get their benefits together. Marketing manufacturing accounting as well as staffing in the hospitality usages should be taught in the university in the practical aspect. It is associated to the studies of Hesselbein et al. (1996), and Suresat (2003).

The follow up factor could affect and considered as the third rank influence supported by Berlo (1960) and Kisukpan (1995). It showed the evaluation process was the vital factor that led to achieving the target. Administrators were considered as the significant part in communication between an education institute and the entrepreneurs, while the guideline of promoting the mutual understanding among the organizations could lead to the good relationship in experience and professional exchange as well as knowledge transferring from each other. Obviously, technology transfer, planning and administrating, and follow up were the crucial factors influencing the cooperation between an education institute and entrepreneurs in education management at Department of Hospitality, Faculty of Liberal Arts, RMUTK. This could focus the advantages and benefits gained by both organizations. The cooperative working could indicate guidelines to lead the future achievement as well as to find out the solution when problems occur. The mutual understanding among the institute's personnel could relate to the reliability and friendship, which obviously lead to the higher achievement of the education institute. It could be a significant part to support the success of the university in a better manner.

Administrators should have the obvious long-range action plan between the university and entrepreneurs, including good communication among staff of the organizations for the future application.

Moreover, it should provide well training in the application of instruments, equipments budget appropriately and effectively, enhance good coordinator. Entrepreneurs should devote and assist educational institutes in work cooperation, and should realize the importance of cooperative work, and facilitate students' training. This could help them to produce qualified graduates for the entrepreneurs effectively and efficiently.

Further studies should be focused on both academic and enterprise administrators' co-operation not only at degree level but also at vocational level. Each region or location and demand of guests should be involved in the investigation.

## ACKNOWLEDGEMENTS

This study was supported in part by National Research Council through Rajamangala University of Technology Krungthep program entitled, "The cooperation between education institutes and entrepreneurs as well as developing cooperation between education institutes and entrepreneurs in education management at Department of Hospitality, Faculty of Liberal Arts, Rajamangala University of Technology Krungthep during the year 2011. The author would like to extend special thanks to Professor Dr. Somsak Pantuwatana for revising the manuscript and many valuable suggestions throughout this research.

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