Development of the Causal Relationship Model for Innovative Communication Management on Image and Reputation of the International Programs in Thai Universities

Nutthaboon Pornrattanacharoen, National Institute of Development Administration, Thailand
Pratoom Rerkklang, National Institute of Development Administration, Thailand

Abstract
The aim of this research is to study the development of the causal relationship model of the management innovation of image and reputation communication of international programs of Thai universities. This research is a mixed research using a combination of methodologies including secondary data, qualitative research, and quantitative research. The samples are students studying in a bilingual or English programs at public and private high schools in the Greater Bangkok Area totaling 580 respondents. Structural Equation Modelling was used to analyze the direct and indirect effects among the variables. The results of the analysis of the structural equation of the causal relationship model of management innovation of image and reputation communication of international programs of Thai universities were consistent with the empirical data in accordance to the statistical acceptance level with Chi-Square value = 42.124 df = 31.0 Sig. = 0.088 > 0.05 and CMIN/df. = 1.359 < 2.0. This model consists of the variables of perception of news and general information, integrated marketing communication, management, image, and reputation of international programs of universities in Thailand. The model fits the empirical data. The most influential factor affecting the image and reputation of international programs in Thai universities was the program management. This is followed by the integrated marketing communication of international programs in Thai universities.

Keywords: Causal Relationships Model Development, Innovation Communication Management, Image and Reputation of the International Programs in Thai Universities

iafor
The International Academic Forum
www.iafor.org

Background and Significance of Study

Education is an important indicator of the quality of the populace, as can be observed in the case of Thailand. This study aims to examine the innovation of communications management in the development of the image and reputation of international programs in Thai universities, which is a highly competitive segment. In response to globalization, education has developed significantly to meet international standard requirements.

Globalization is the result of development in communications, transportation, and technology. The world is interconnected conveniently at high speed. This has led to truly significant changes in the ways of education. As a result, the world is interconnected in many ways such as in the labor market, which requires those who can speak a foreign language. In addition, there are numerous foreigners visiting Thailand for travel and investment. Thus, there is a need to study a foreign language. There is also an opportunity for foreign institutions to invest and compete in the education sector. This has led to the trend of opening more international programs in English, Chinese, and Japanese. Over time these programs have become more popular (Research and Development Office, Ministry of Education, 2007).

The educational institution has to have a plan for the future. It must be able to adapt to the changes to keep up with the times. This is particularly true for institutions to survive the competition to provide education that meets the standard of internationalization. This is necessary for acceptance at both the domestic and international level. Many institutions have opened international programs. They have developed more exchange programs for faculty members and students with foreign institutions. The emphasis is on the development of quality education adapting to the new technology, sciences, and communications. These changes are driving the world to fuse into one.

Innovation in communications management can be used to develop the image and reputation of the international programs in Thai universities. These programs are targeted towards students in high schools with international and bilingual or English programs. When these students graduate, they would choose to study in undergraduate programs based on image and reputation of the international programs in Thai universities. The differences of perception led to the success of these universities and its competitiveness in the future.

Review of Literature

The researchers found that image can be created through communications such as advertising, public relations, and customer service. This is the experience that has to integrated in every aspect of the organization that is relevant to the target. Through these integrated marketing communications efforts, the positioning can be determined. As a result, this impacts the image in terms of service, price, and channel of service provision, which can create corporate reputation. Collective judgements from observers make assessments over time resulting in corporate reputation.

Thus, the communications in terms of image and reputation of international programs in Thai universities have to be built based on innovation and integration of many

disciplines. This has to combine new knowledge and forms of communications that have to be appropriately distinctive and creative. It is the use of modern communications aimed at the target audience that would lead to the opportunity of success. Consequently, those in education management need to develop communications that can reach their target clearly, effectively, and quickly within the context of change.

Research Objectives

This study aims to develop the causal relationship model among the variables, management innovation of image and reputation communication in international programs in Thai universities. The resulting research objectives are presented as follows:
1.   Develop the causal relationship model for management innovation of image and reputation communication effectiveness in international programs in Thai universities.
2.   Examine the causal model in terms of the relationship among the variables, management innovation of image and reputation communication in international programs in Thai universities.

Research Hypotheses

Based on the review of literature and development of the research conceptual model, the following hypotheses have been developed as follows:

H_1: Program management of international programs in Thai universities has an impact on the image and reputation of the programs.
H_2: Program management of international programs in Thai universities has an impact on the integrated marketing communications of the programs.
H_3: Program management of international programs in Thai universities has an impact on the general awareness of the programs.
H_4: Integrated marketing communications of international programs in Thai universities has an impact on the general awareness of the programs.
H_5: Integrated marketing communications of international programs in Thai universities has an impact on the image and reputation of the programs.
H_6: General awareness of the international programs in Thai universities has an impact on the image and reputation of the programs.
H_7: General awareness of international programs in Thai universities has a direct effect on the image and reputation of the programs.
H_8: Integrated marketing communications of international programs in Thai universities has a direct effect on the image and reputation of the programs.

Research Methodology

The research utilized the mixed research methodology using a combination of secondary data, qualitative research, and quantitative research. The emphasis would be on the undergraduate degree level. The survey method was utilized using a questionnaire for data collection from the population of high school students, who are interested in studying in international programs. The respondents were from both public and private institutions in the Greater Bangkok Area. A total of 580 usable

questionnaires were collected. Of this number, 180 respondents were not interested to study in international programs in Thailand, while the remaining 400 were. Confirmatory Factor Analysis (CFA) was conducted to test model fit. The assessment of model fit would be made by examining the indices Chi-Square, CMIN/df., CFI, GFI, IFI, NFI, AGFI, RMSEA, and RMR. After establishing model fit, the direct and indirect effect would be examined using structural equation model analysis.

Data Analysis

The model fit analysis of the causal structural equation model examining the relationship among the variables, management innovation of image and reputation communication in international programs in Thai universities. The structural equation model (SEM) examined the awareness of general information, integrated marketing communication messages, program management, and image and reputation of the program. To attain model fit, the researchers conducted modification indices based on consideration of the weights and R2 to check the variation. The results are presented in Tables 1 and 2.

The structural equation model shows the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities. After modification the model fit the empirical data well based on the criteria defined by Hair et al. (1998), Bollen (1989) and Sorbon (1996). The indices show statistical acceptance level with Chi-Square value = 42.124 df = 31.0 Sig. = 0.088 > 0.05 and CMIN/df. = 1.359 < 2.0. The analysis of seven indices prove the model fit to the empirical data as presented as follows:

1.   Comparative Fit Index (CFI) of 0.997 is more than 0.90, which is in line with Hair et al. (1998) that CFI value of more than 0.90 is good.
2.   Goodness of Fit Index (GFI) shows the variation explained by the model. The value of 0.984 > 0.90, which is in line with Hair et al. (1998) and Mueller (1996) that GFI value of 0.90 is good model fit.
3.   Adjusted Goodness of Fit Index (AGFI) shows the variation explained the variance adjusted for the degrees of freedom. The AGFI have values ranging from 0 to 1 and 0.90 and above is acceptable (Durande-Moreau & Usunier, 1999). The value of 0.954 > 0.90 shows good model fit.
4.   Root Mean Square Error of Approximation (RMSEA) should have value less than 0.05 or between 0.05 – 0.08. The model fit to the empirical data is shown in the value 0.03 < 0.08. This shows very good model fit, which is in line with Hair et al. (1998) and Browne and Cudeck (1993).
5.   Normed Fit Index (NFI) is the statistics for testing the hypothesis. NFI should have the value more than 0.90 (Hair et al., 1998). The value 0.989 > 0.90 shows good model fit.
6.   Incremental Fit Index (IFI) is a test of the relationship among the variables. The value of more than 0.90 shows how well the model explains the relationship in the model (Hair et al., 1998). The value 0.997 > 0.90 shows good model fit.
7.   Root Mean Square Residual (RMR) is an index that examines the hypotheses. RMR should be at less than 0.05. The ideal value is as close to 0 as possible. The RMR value of 0.012 < 0.05 is very good (Diamantopoulos & Siguaw, 2000).

The analysis of the 7 indices statistically confirm the fit of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities to the empirical data. The variables are awareness of general information, integrated marketing communications, management, and image with reputation of international programs in Thai universities. The model is confirmed in terms of validity and model fit. The results are presented in Table 1.

Table 1 Structural equation model analysis of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities

Variables (Paired Variables)		λ	SE.	t-value	Sig.	R^2
Integrated marketing communications	< Program management	0.67	0.053	13.980	0.000**	45.0%
General awareness	< Program management	0.18	0.106	2.156	0.031*	12.0%
General awareness	< Integrated marketing communications	0.19	0.095	2.290	0.022*	12.0%
Image and reputation	< Integrated marketing communications	0.56	0.083	7.318	0.000**	70.0%
Image and reputation	< General awareness	-0.10	0.045	-2.033	0.042*	70.0%
Image and reputation	< Program management	0.38	0.074	6.177	0.000**	70.0%

** Statistical significance at 0.001 level
*Statistical significance at 0.05 level

The analysis of the structural model of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities. The independent variables are program management, integrated marketing communications, awareness of general information, and the dependent variables were image and reputation of the international programs in Thai universities. The analysis utilized regression to explain the variation as presented in the following section.

1.   In terms of program management of the international program in Thai universities comprised of 3 observed variables, which are type of international programs, type of management, and image of program management. The regression coefficient ranged between 0.84 – 0.94 and the R-squared values ranged from 71% - 89%. The analysis revealed that program management of international programs has an impact on the of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities. The 3 direct and 3 indirect relationships examined are presented as follows:

1.1Program management of the international programs, which is the independent variable, has a direct positive impact on integrated marketing communications of international programs in Thai universities. The beta coefficient value is 0.67 with an error value of 0.053 and t-value of 13.980 (Sig. .000 < 0.001). The model explains the variation of the model at 45% at the significance level of 0.001.

1.2 Program management of the international programs has a direct positive effect on awareness of general information regarding international programs in Thai universities. The beta coefficient value is 0.18 with an error value of 0.106 and t-value of 2.156 (Sig. .031 < 0.05). The model explains the variation of the model at 12% at the significance level of 0.05.

1.3 Program management of the international programs has a direct positive effect on image and reputation of international programs in Thai universities. The beta value is 0.38 with an error value of 0.074 and t-value of 6.177 (Sig. .000 < 0.001). The model explains the variation of the model at 70% at the significance level of 0.001.

1.4 Program management of international programs has an indirect effect on image and reputation of international programs in Thai universities through integrated marketing communications with a beta coefficient value of 0.38 (0.67x0.56).

1.5 Program management of international programs has an indirect effect on image and reputation of international programs in Thai universities through general awareness with a beta value of -0.02 (0.18x(-0.10)).

1.6 Program management of international programs has an indirect effect on general awareness of international programs in Thai universities through integrated marketing communications with a beta value of 0.13 (0.67x0.19).

2.   Integrated marketing communications of international programs in Thai universities is comprised of three observable variables of marketing activities for awareness, public relations, and advertising. The regression coefficient ranged between 0.62 – 0.86 and the R-squared values ranged from 58% - 73%. The analysis revealed that integrated marketing communications has an impact on the of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities. The 2 direct and 1 indirect relationship examined are presented as follows:

2.1   Integrated marketing communications of the international programs has a direct positive impact on awareness of general information of international programs in Thai universities. The beta value is 0.19 with an error value of 0.095 and t-value of 2.290 (Sig. .022 < 0.05). The model explains the variation of the model at 12% at the significance level of 0.05.

2.2   Integrated marketing communications of the international programs has a direct positive impact on reputation and image of international programs in Thai universities. The beta value is 0.56 with an error value of 0.083 and t-value of 7.318 (Sig. .000 < 0.001). The model explains the variation of the model at 70% at the significance level of 0.001.

2.3   Integrated marketing communications of international programs has an indirect effect on reputation and image of international programs in Thai universities through integrated marketing communications with a beta value of -0.02 (0.19x(-0.10)).

3.   General awareness of the international program in Thai universities comprised of 4 observed variables, which are personal communications, mass media, online social media, and learning activities media. The regression coefficient ranged between 0.70 – 0.79 and the R-squared values ranged from 41% - 63%. The analysis revealed that general awareness has have an impact on the of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities. The 1 direct relationship examined is presented as follows:

3.1 General awareness of the international programs has a direct negative impact on image and reputation of international programs in Thai universities. The beta value is -0.10 with an error value of 0.045 and t-value of -2.033 (Sig. .042 < 0.05). The model explains the variation of the model at 70% at the significance level of 0.05.

4.   Image and reputation of the international program in Thai universities comprised of 3 observed variables, which are education institution, service, and support being international. The regression coefficient ranged between 0.84 – 0.93 and the R-squared values ranged from 60% - 87%.

Table 2 Summary of the structural equation model analysis of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities

Variables	Effects	Integrated marketing communications	General awareness	Image and reputation
Management of the programs	Direct Effects	0.67	0.18	0.38
	Indirect Effects	-	0.13	0.34
	Total Effects	0.67	0.31	0.72
Integrated marketing communications	Direct Effects	N/A	0.19	0.56
	Indirect Effects	N/A	-	(-0.02)
	Total Effects	N/A	0.19	0.54
General awareness	Direct Effects	N/A	N/A	(-0.10)
	Indirect Effects	N/A	N/A	-
	Total Effects	N/A	N/A	(-0.10)
R^2		45.0%	12.0%	70.0%

The analysis of the structural model of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities comprised of the variables of program management, integrated marketing communications, general awareness, and dependent variables, which are image and reputation. The factor that was the most influential on image and reputation of international programs is program management (Beta coefficient = 0.72). This is followed by integrated marketing communications (Beta coefficient = 0.54). The general awareness has a negative relationship with Beta coefficient of -0.10. The model explains 70% of the variance. The analysis revealed that the most influential factors on general awareness is program management of international programs in Thai universities (Beta coefficient = 0.31). This is followed by integrated marketing communications (Beta coefficient = 0.19) explaining 12% variance. The program management of international programs in Thai universities has a positive impact on integrated marketing communications with Beta coefficient of 0.67 explaining 45% variance.

The analysis of the structural equation model shows that six out of eight of the hypotheses were supported as presented in the following section.

The analysis of the structural equation model supports H_1, wherein program management has a positive impact on image and reputation, with a Beta coefficient of 0.37 explaining 70% of the variance at the significance level of 0.001. This is followed by the analysis for H_2, wherein program management has a positive impact on integrated marketing communications, which has a Beta coefficient of 0.67 explaining 45% of the variance at the significance level of 0.001. H_3 , wherein program management has a positive impact on general awareness, has a Beta coefficient of 0.18 explaining 12% of the variance at the significance level of 0.05. Furthermore, H_4, wherein the integrated marketing communications has a positive impact on general awareness, has the Beta coefficient of 0.19 explaining 12% variance at the significance level of 0.05. H_5, integrated marketing communications has a positive impact on image and reputation, with a Beta coefficient of 0.56 explaining 70% variance at the significance level of 0.001. H_6, general awareness has a negative impact on the image and reputation, with a Beta coefficient of -0.10 explaining 70% variance at the significance level of 0.001. Both H_7 (Beta coefficient -0.02) and H_8 (Beta coefficient 0.38) were not supported.

Discussion of Research Findings

Secondary data based on the analysis of data available from the universities shows that there are 332 undergraduate programs from 56 universities (data collected March 31, 2019). Most of the universities offered international undergraduate programs. These universities are usually located in the city area such as Bangkok Metropolitan Area (Bangkok including Pathum Thani and Samut Prakarn). The provincial universities were located in the major city of each respective region such as Songkhla, Khon Kaen, Phuket, Chiang Mai, Ubol Ratchathani, and Chonburi.

The objectives of the undergraduate international programs can be summarized as follows:
1.   To improve standard of Thai education to the level of internationalization as part of the drive to become a world class university as prescribed by the Commission

for Higher Education as part of the strategy to develop the university's curriculum to meet modern standards.

2.   To serve the need in the Thai and international market in terms of preparation for graduates' future careers.

3.   To prepare Thailand to meet the challenges of the ASEAN Economic Community (AEC) in terms of human resources development.

4.   To develop communications prowess for the necessary graduates' future career that would open the door for regional opportunities.

5.   To develop cooperation with well-known international institutions through academic and quality education in the form of faculty and student exchanges.

6.   To enable Thai and foreign students to join study abroad programs and student exchanges as well as joint research projects.

7.   To develop the skills of students in living in harmony with those who are different in terms of beliefs, way of life, language, and culture. This would enhance the opportunity of students to experience learning outside of the class setting through cooperative education that would be critical for developing skills necessary for the future.

8.   To develop the confidence in terms of language capabilities for communications in an international setting. This would enable students to analyze the situation and respond in the effective appropriate means leading to expertise in the use of English in intercultural communications.

9.   To create the opportunity for Thai and foreign students to exchange their knowledge and culture together. In addition, faculty members can exchange their academic and cultural perspectives.

10.   To create graduates who are experts in intercultural communicative competence together with the use of English as a global language proficiency that is important in the digital age of the 21st century.

Program management of international programs at the undergraduate level can be categorized into three types as follows:

Type 1- The program management of international programs at the undergraduate level is based in the faculty of department within a university. This is seen in Chulalongkorn University, Thammasat University, Kasetsart University, Mahidol University, Chiang Mai University, Srinakarin Wirot University, Prachomklao Thonburi Technology Institute, Payap University, Sripatum University, Dusit Thani College, Rajabhat Chiang Mai University, Suan Dusit University, and Rajabhat Suan Sunantha University.

Type 2- The program management is based in a fully international institution or university at the undergraduate level. Examples include Mahidol University, Prince of Songkla University, Silapakorn University, Rajamongkol Technology Institute, Dhurakijbundit University, Rangsit University, University of Thai Chamber of Commerce, Bangkok University, Assumption University, Webster University, St. Theresa College, and Stamford University.

Type 3- The university has a combined program management system, which has both the faculty/department managing the programs through direct cooperation with international institutions within a framework of international college such as in the case of Thammasat University, Silapakorn University, and Mahidol University.

Based on the interviews these international programs targeted two groups of students. The first are those from international schools, English Program (EP), Bilingual Program, and those from both public and private Thai high schools. The second group are those from foreign countries, who would like to study or have an exchange in Thailand.

There were 180 respondents, who reported not wanting to study in Thai international programs. They identified many factors such as the ability to survive, confidence in creative thinking, prefer a global perspective, and has more variety of programs available, since Thai international programs have limited selection. The remaining 400 respondents selected to study in Thailand because of many factors, which include good English skills, has qualified faculty members based on international standards, expect higher salary upon graduation, and opportunity for further education abroad.

From the findings it can be concluded that general awareness of international programs in Thai universities have been made through personal communications, the most. This is followed by online social media, academic activities, and mass media. The most important element in integrated marketing communications is public relations followed by advertising and sales promotion. Program management comprised of three factors namely the characteristics of the international programs, management type, and image. It is found that the most important factor is characteristics followed by image and type of management.

The structural equation model analysis of the causal relationship model for management of innovation of image and reputation communication in international programs in Thai universities is in line with the study of Klayprayong (2013). The author explained that international programs aiming to reach international standards to compete in the ASEAN region must have 6 components namely – 1. Agility in management; 2. Curriculum emphasis on internationalization; 3. Students represent a variety of nationalities; 4. Faculty members represent a variety of nationalities; 5. Have international activities; and 6. Necessary facilities to manage and operate an international program. There are three forms of teaching and learning. The first is the English Program format, which is the initial step of internationalization. The curriculum is Thai that is taught in English. Almost all of the students and faculty members are Thai. The second type is all teaching and learning is conducted in English wherein foreign students attend classes with Thais. There are some foreign faculty members. The third format is the international program, wherein every aspect is internationalized. All courses are taught in a foreign language. About 10% of the student body are foreign students. The faculty members are experts in their field, who can teach in the international language. In addition, there are necessary facilities and exchange programs available. Students and faculty members need to adapt to the changes driven by globalization. These trends have resulted in the effort of internationalization. Graduates need to have the necessary skills for future employment. Thus, it is necessary to have an emphasis on supporting students and faculty members to keep up innovation, knowledge creation, exchanges of ideas, and working in harmony while using technology appropriately. Innovative communications of image and reputation of universities, must emphasize on the image and reputation of the curriculum. The continuous development of teaching and learning is important for the maintenance of the good and trustworthy reputation in society, which is the most important factor in the decision making of students in

selecting an international program at the undergraduate level. Other factors that students consider in the selection of international programs are social responsibility activities, economy, and environment concerns. In combination these factors contribute to the better quality of life of all people in this world.

Recommendations

Based on the findings, five recommendations can be made as follows:

1.   Universities that would like to open international programs should aim to develop the curriculum that meets international standards in a systematic manner. This would start with the development of a shared vision for all groups of staff members as well as stakeholders.
2.   The image of the university is necessary for students' consideration of the program. Therefore, it is important to build the image and reputation of the international programs. Characteristics that are important are innovativeness of the programs through the use of information technology and online communications developed for learners in the 21st century.
3.   Integration of management and strategy for innovation in the management of image communications as the main policy that should be indicated in the university's strategic plan for future competitive advantage.
4.   Create opportunities for learning and exchanges of innovation in image communications to develop strategic management. The innovative communications should be based on analysis of the organization, society, and community. This would lead to the development of learning solutions for society, economy, and the environment as part of the world community.
5.   The teaching and learning should be developed based on the innovative communications of image and reputation for a sustainable future. The learners would eventually learn more about their environment in real time professionally. Universities need to develop international programs that meet international standards by promoting academic works that create the reputation for the university. Teaching and learning should enable effective knowledge and experience sharing facilitated by faculty members. This would enable graduates to become valuable assets in their future occupations in both the private and public sectors. Therefore, the university can thus be confident that the graduates are not only qualified at the local but can compete in the international arena.

References

Bollen, K.A. (1989). "Structural Equations with Latent Variables". New York: John Wiley &Sons.

Browne, M. W., & Cudeck, R. (1993). "Alternative ways of assessing model fit". In K. A. Bollen & J. S. Long (Eds.). Testing structural equation models. (136–162).

Department of International Trade Promotion, Ministry of Commerce. 2013. "International Education Business Report". Retrieved October 25, 2018 (https://www.ditp.go.th/contents_attach/85967/85967.pdf)

Diamantopoulos, A., & Siguaw, J. A. (2000). "Introducing LISREL: A Guide for the Uninitiated". Thousand Oaks, CA: Sage.

Hair, J., Anderson, R., Tatham, R. L., &Black, W. C. (1998). "Multivariate data analysis (5thed.)". NJ: Upper Saddle River, Prentice-Hall.

Hair, J., Blak, W. C., Barbin, B. J., Anderson, R. E., &Tatham, R. L. (2006). "Multivariate Data Analysis (6th ed.)". Upper Saddle River, NJ: Prentice-Hall.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). "Multivariate Data Analysis (7th ed.)". New Jersey: Prentice Hall, Upper Saddle River.

Research and Development Office, Office of the Education Council, Ministry of Education. (2017). "Report of the Globalization impact the Thailand education in 5 Years". Bangkok: 72

Office of the Higher Education. (2018). Retrieved October 25, 2018 (http://www.mua.go.th/2018/?page_id=2879)

Waraporn Klayprayong. (2013). "The management of international program in the Thailand's higher education institutions". Panyapiwat Journal Vol.5 No.1 (July 2013)

Walsh, G., Beatty, S.E. and Shiu, E.M.K.. (2009). "The customer-based corporate reputation scale: replication and short form". Journal of Business Research, 62 (No. 10): 924-930.