Academic Cooperative Model of Preschool Teachers' Education Program between Baise and Bangkokthonburi University

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Abstract

The purpose of this study is to to find the index of the model and construct an academic cooperative model between BSU and BTU on the preschool teachers' education program.

This is a study of quantitative of questionnaire. After the calculation, the reliability and validity of the questionnaire met the requirements of criteria. The survey collected a total of 219 samples of teachers and students of the preschool teacher education project in BSU (Baise University) and BTU (Bangkokthonburi University). The survey is about the cooperation attitude of the two schools to carry out the preschool teacher education project, the conditions and content of cooperation needs. Through exploratory factor analysis, based on the obtained factors, the academic cooperative model is preliminarily constructed.

Regarding the construction of the academic cooperation model of BTU and BSU on preschool teacher education projects, a total of 4 common factors and 15 index items were obtained through the analysis of exploratory factors based on the data of questionnaire survey. Factor model analysis results show all criteria are met minimum requirement. The data analysis show that the model fits well with the empirical data. Hench, the model is right.

Keywords: Cooperated Model, Preschool Teachers' Education, China and Thailand

1. Introduction

In the topic of sustainable development of the world economy, the development of preschool education is a common topic all over the world, and “low investment and high return” have become a common point of view that emphasizes pre-school education. Heckman, the Nobel laureate in economics, once pointed out that no policy like preschool education is favoured by economists because it has a much higher return on investment than other stages of education.

Thailand is an important area for the “Silk Road Economic Belt”. Chinese “Belt and Road Initiative” is highly aligned with Thailand’s “Eastern Economic Corridor” development strategy and the “Thailand 4.0” strategic concept.

Therefore, the cooperation between China and Thailand will become more and more frequent, and the cooperation in the field of education will also be on a higher level.

From the perspective of the current national policies of China and Thailand, both countries have the purpose of building education powers and education powers and insist on building education as an important benchmark for national development.

2. Objective

The central purpose of this study was to find the index of model and construct the model of two universities from China and Thailand in preschool teacher education program? This study attempts to answer the following questions:

Q1: What is the cooperative model of two universities from China and Thailand in preschool teacher education program?

Q2: What is the index of the cooperative model of two universities from China and Thailand in preschool teacher education program?

3. Prior studies

Preschool teachers’ education program refers to the work process of training personnel who can work in preschool education after the prescribed years of study through some curriculum like knowledge and skill about the children, training environment and equipment, professional teachers and policies provided by university.

Model of cooperation in education: Higher education cooperation has a long history, and the complementarity between different higher education institutions can better promote talent training. Especially in recent years, facing the rapid development of economy and society

for knowledge, innovation and talents, more and more government and higher education managers regard institutional cooperation as an effective solution to meet the needs. Liu Haibin (2020) sorts out the cooperation model of higher education into three levels and more than ten models. The first level is vision-level cooperation, with complementary needs as the common vision. The mode of cooperation is mainly partial resource sharing or the provision of multilateral education services through agreements; the second level is strategic-level cooperation, with mutual recognition of credits and degrees The main feature is the mutual selection of some courses and the joint development of the curriculum system or the establishment of branches; the third level is ecological cooperation, that is, in-depth cooperation from the perspective of the higher education ecosystem, such as the merger of higher education institutions or shared campuses Way to form a new higher education consortium. As shown in the table 1.

Table1: Cooperation Model.

Cooperation Model		**Features**
Level	**Model**	
Vision level	Contract model	Provide educational services in the form of cooperation agreements.
	Economic model	To form an educational service network in a multilateral agreement.
	Sharing mode	Sharing some educational resources
	Collaboration model	The cooperation model extends to multiple levels between institutions.
Strategic level	Credit mutual recognition model	Inter-institutional mutual recognition of credits.
	Joint course model	Sharing some course resources and mutual recognition among institutions.
	Joint development model	Institutions jointly develop and improve all curriculum systems.
	Joint school model	Institutions cooperate to establish secondary education institutions or branch schools.
Ecology level	Federal model	Deep cooperation between institutions, cooperative management institutions,

Cooperation Model		Features
Level	Model	
		establishment of regional, shared campus.
	Future university model	Deep cooperation between institutions, cooperative management institutions, and establishment of a campus that spans time and space.
	Merger model	Institutions merge to form a new higher education institution.

Sino-foreign cooperation in education: Sino-foreign cooperation in running schools emerged after the Reform and Opening up policy. After entering the 21st century, with the continuous deepening of education reform and the continuous improvement of people's living standards, more and more domestic universities and foreign universities have cooperated in running schools. Wen Yan (2019) analysed that Sino-foreign cooperation in running schools was due to the assistance of developed countries' governments to provide funds, knowledge, equipment, and other resources for China's development in the field of education after the Second World War. China's education level and quality were relatively backward at that time.

From the perspective of teaching, administration, personnel, and finance in the four major sections of education management, the focus of Sino-foreign education cooperation is focused on the large field of teaching, which can be divided into the following areas:

Curriculum: It mainly includes mutual courses. Students learn from each other's courses or go to the other country for short-term courses (including internships); introduce course syllabus, plans, teaching materials, and teaching methods;

Teachers: Mainly including hiring teachers to give lectures; sending teachers to each other's units for learning; improving teachers' bilingual teaching ability.

Qualification certification: mainly includes mutual recognition of course credits; mutual issuance of learning diplomas and degrees.

It also includes cooperation in teaching and research projects, teaming up to carry out teaching research.

4. Conceptual framework

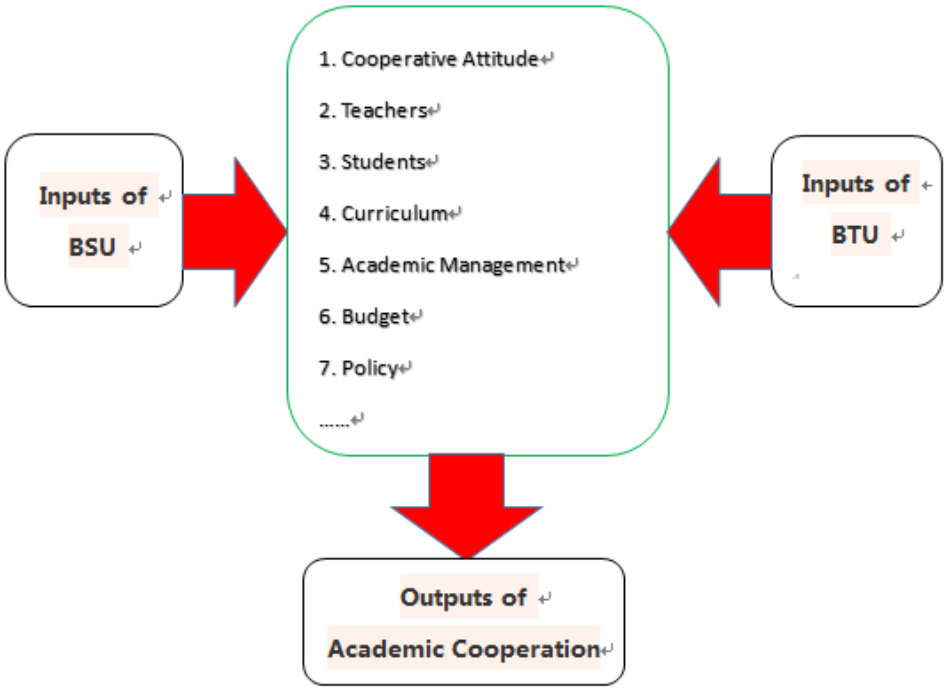

Figure 1: Conceptual frame

5. Study method

The study compiled a questionnaire on the cooperation model of the Sino-Thai preschool teachers' education program. By calculating, the reliability of questionnaire is 0.978, and the KMO of validity of the questionnaire is 0966, all of them are meet the criteria, the questionnaire can be used.

Table2: Questionnaire

NO.	Research items	1	2	3	4	5
1	Introduce each other and add some courses from each other's schools.					
2	Invite teachers from each other's school to teach some courses in their own school.					
3	Invite teachers from each other's school to teach some courses in their school.					
4	Combine the teaching requirements of your own school to jointly research and develop a curriculum plan.					

NO.	Research items	1	2	3	4	5
5	Share course teaching resources with each other through network technology.					
6	Add some elective courses related to each other's school according to the needs of students.					
7	Go to each other's schools for certain course learning and practical visits.					
8	Earn credits for each other’s school courses.					
9	Take some lessons from each other’s school teachers.					
10	Freely decide whether to study in each other’s school.					
11	Freely decide whether to study some courses offered by each other's school.					
12	Open a resource sharing platform for some course learning with each other, and learn through the Internet.					
13	Provide each other with various learning guarantee conditions for studying in each other’s school, such as board and lodging, etc.					
14	Participate in related club activities organized by the students of the other school to strengthen learning exchanges.					
15	Mutual establishment of academic cooperation research teams for teachers.					
16	Training bilingual teachers with each other.					
17	Invite teachers from each other's schools to observe and exchange teaching.					
18	Hire each other's teachers to participate in teaching and academic lectures.					
19	Provide opportunities for each other's teachers to improve themselves					
20	Regularly update the terms of cooperation and formulate cooperation rules.					

NO.	Research items	1	2	3	4	5
21	Establish communication channels with each other and communicate in time.					
22	Provide each other with special funds for teachers' teaching, student learning, etc.					
23	Set up special working groups with each other and allocate special staff reasonably.					

6. Findings

The study selected a total of 219 students and teachers from BSU (Chinese university) and BTU(Thai university) pre-school teacher education programs, of whom 182 (of whom BSU 150 and BTU 32) were students, as shown in Table 4.1. There are a total of 37 teachers (BSU 32, BTU 5). In view of the different groups of students and teachers, which may have an impact on the content of the study, in order to accurately grasp the true situation of the survey data, the survey also divided the students into ordinary students and students responsible for class affairs management, and the teachers into student counsellors, teaching secretaries, teaching professionals, director of the teaching and research department, and other education managers. A total of 27 were specialized teaching staff, accounting for 73 per cent of the total number of teachers surveyed. The general number of students was 166, accounting for 91.2 per cent of the number of students surveyed.

After two screenings, the eight items RI3, RI4, RI7, RI9, RI13, RI20, RI21, RI23 were removed for reanalysis, with the following results:

Table 3: KMO and Bartlett test after deleted items.

KMO		0.963
Bartlett's Test	Approx. Chi-Square	3053.814
	df	105
	p value	0.000

Table 4: The post-rotation factor loading after deleted items**.**

Items	Factor loading				Communality (common factor variance)
	Factor 1	Factor 2	Factor 3	Factor 4	
RI5	0.582	0.352	0.500	0.135	0.731
RI6	0.661	0.233	0.468	0.223	0.760
RI12	0.634	0.428	0.329	0.232	0.747
RI14	0.599	0.307	0.251	0.527	0.793
RI15	0.661	0.400	0.344	0.288	0.798
RI17	0.714	0.339	0.271	0.299	0.787
RI18	0.794	0.245	0.220	0.328	0.847
RI19	0.683	0.356	0.166	0.476	0.847
RI8	0.380	0.643	0.355	0.240	0.742
RI10	0.277	0.857	0.157	0.203	0.877
RI11	0.360	0.666	0.304	0.353	0.791
RI1	0.277	0.206	0.829	0.260	0.874
RI2	0.347	0.440	0.607	0.350	0.804
RI16	0.284	0.257	0.308	0.796	0.876
RI22	0.509	0.307	0.224	0.627	0.797

Note: If the numbers in the table are colored: blue indicates that the absolute value of the factor loading is greater than 0.4, and red indicates that the commonness (common factor variance) is less than 0.4.

Recalibrated dimension items, as shown in the following table 5:

Table 5: The factor dimension.

Factor	**Research Items (RI)**
Factor 1	**RI5**: Share course teaching resources with each other through network technology **RI6**: Add some elective courses related to each other's school according to the needs of students **RI12**: Open a resource sharing platform for some course learning with each other, and learn through the Internet **RI14**: Participate in related club activities organized by the students of the other school to strengthen learning exchanges

	RI15: Mutual establishment of academic cooperation research teams for teachers **RI17**: Invite teachers from each other's schools to observe and exchange teaching **RI18**: Hire each other's teachers to participate in teaching and academic lectures **RI19**: Provide opportunities for each other's teachers to improve themselves
Factor 2	**RI8**: Earn credits for each other's school courses **RI10**: Freely decide whether to study in each other's school **RI11**: Freely decide whether to study some courses offered by each other's school
Factor 3	**RI1**: Introduce each other and add some courses from each other's schools **RI2**: Invite teachers from each other's school to teach some courses in their own school
Factor 4	**RI16**: Training bilingual teachers with each other **RI22**: Provide each other with special funds for teachers' teaching, student learning, etc.

Based on the above dimension division and combining the data, the model construction of the pre-school teacher education program cooperation between BSU and BTU can be constructed. By used the analysis of confirmatory factor analysis, the model of four factors, as follows:

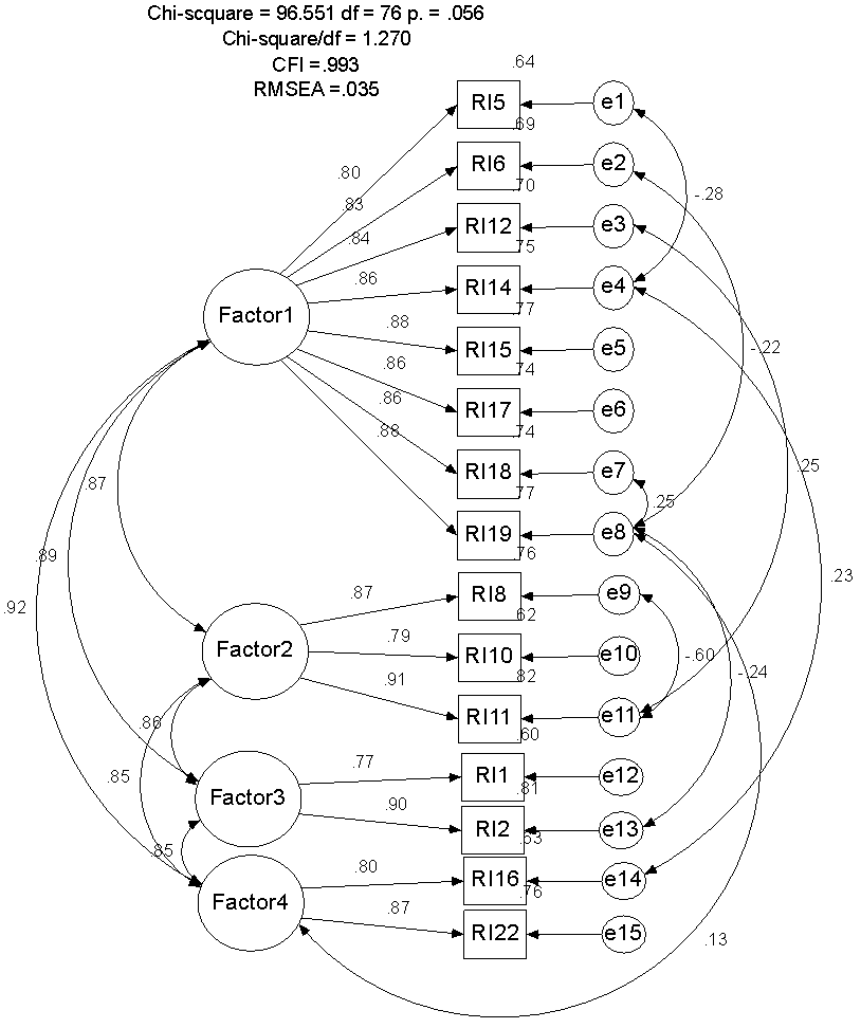

Figure 2: CFA model under the Standardized estimates.

Table 6: Model evaluation index**.**

Criteria	Threshold	Measure	Evaluate
Chi-square, (df.)	—	96.551 （76）	—
P-value	> .05	.056	Passed
Chi-square/df	< 5	1.270	Passed
RMSEA	.08	.035	Passed
CFI	>.90	.993	Passed

As figure 2 and table 6 showing, Chi-square=96.551, df=76, P-value=0.056>0 .05, Chi-square/df=1.270< 5, RMSEA=0.035, CFI=0.993>0.90. All criteria are met minimum requirement. The model fit well with the empirical data, Hench, the model is right.

As table 7 showing: all loading of research items on factors are significant (p value ***means significant).

Table 7: Regression weights.

			Estimate	S.E.	C.R.	P	Label
RI5	<---	Factor1	1.000				
RI6	<---	Factor1	1.055	.074	14.335	***	par_1
RI12	<---	Factor1	1.068	.073	14.604	***	par_2
RI14	<---	Factor1	1.084	.080	13.531	***	par_3
RI15	<---	Factor1	1.085	.070	15.560	***	par_4
RI17	<---	Factor1	1.060	.070	15.208	***	par_5
RI18	<---	Factor1	1.073	.071	15.066	***	par_6
RI19	<---	Factor1	1.013	.065	15.569	***	par_7
RI8	<---	Factor2	1.000				
RI10	<---	Factor2	.879	.065	13.459	***	par_8
RI11	<---	Factor2	.965	.067	14.516	***	par_9
RI1	<---	Factor3	1.000				
RI2	<---	Factor3	1.240	.089	13.994	***	par_10
RI16	<---	Factor4	1.000				
RI22	<---	Factor4	1.023	.070	14.573	***	par_11

And as table 8 showing: all loading have standardized loading greater than 0.50.

Table 8: Standardized regression weights.

	Estimate
RI5 <--- Factor1	.802
RI6 <--- Factor1	.829
RI12 <--- Factor1	.839
RI14 <--- Factor1	.865
RI15 <--- Factor1	.876
RI17 <--- Factor1	.863
RI18 <--- Factor1	.858
RI19 <--- Factor1	.879
RI8 <--- Factor2	.870
RI10 <--- Factor2	.786
RI11 <--- Factor2	.905
RI1 <--- Factor3	.773
RI2 <--- Factor3	.901
RI16 <--- Factor4	.796
RI22 <--- Factor4	.871

There for, all indicators are good enough to measure the factors. In other word, the model has convergent validity. All factors' index CR and AVE met minimum requirement. The measurement model is reliable.

7. Conclusion

After obtaining the data through questionnaire survey, the four dimensions of the best model for cooperation between BSU and BTU in preschool teacher education projects were obtained by using exploratory factor analysis. According to the Sino-Thai Education Cooperation Agreement and the relevant Sino-foreign education cooperation model analysis Liu Haibin (2020) mentioned in the cooperation content is consistent. However, through the expression of factor indicators, the study found that some of the different indicators under the same factor, although the correlation between the content involved in data analysis is very high, but in terms of content expression alone, is actually the expression of two different contents.

Even one indicator is consistent with the object expressed by the indicator under another factor. Such as the indicator RI17 of Factor 1 and the indicator RI 3 of Factor 3, both are basically about inviting each other's school teachers to teach.

The reason is partly there is a high correlation between all the factor indicators in the BSU and BTU pre-school teacher education cooperation model. They are all necessary elements in the system of educational cooperative input and output, and the elements themselves exist independently. On the other hand, because during the design of research tools, the presentation of research items cannot avoid what is contained in another study item. If each other invite teachers to school teaching this cooperation, can be from the perspective of promoting the development of teachers, can also be discussed from the perspective of curriculum, but the promotion of teacher development is the content of teacher management, curriculum management is the content of curriculum management. Both are important elements of educational management system.

8. Discussions

The results of this good model are obtained on the one hand because of the effectiveness of the research tool design based on theoretical analysis. On the other hand, it also reflects the real expectation of cooperation between BSU and BTU. However, the data model is real and effective, in addition to the data itself, also need the relevant field of experts, as well as practical practice to better illustrate the effectiveness of the model.

Although the results of the research on the cooperation model of BSU-BTU preschool teachers' education program is ideal, this study is based on the assumption that when BSU and BTU will have a cooperation, it is the model based on the predicts, and does not take into account the specific problems that arise in the actual process of cooperation. Therefore, the model also needs to be tested in practice, by the collection and analysis of model data is continuously carried out, and being adjusted, and finally the biggest advantages of the model can be reflected.

Of course, perfect model is verified by practice, but this in itself is not in line with the process of practical cooperation. If the cooperation between the two schools on the preschool teacher education project does not have a preliminary cooperation framework as a basis for reference, how can we cooperate smoothly and finally get a perfect model?

Therefore, although this model has imperfections and lacks data support in cooperative practice, it also provides a certain reasonable reference for both parties if they cooperate.

In the future research, it is hoped that the model can continue to refer to the practical data of the cooperation between the two schools, and continue to improve, and eventually become the standard for the in-depth cooperation between the two schools in preschool teacher education projects.

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