A COMPARATIVE STUDY OF TEACHERS' PERCEPTION TOWARDS PROFESSIONAL DEVELOPMENT ACCORDING TO THEIR DEMOGRAPHICS IN AN INTERNATIONAL SCHOOL IN PRACHA UTHIT, BANGKOK

Weichao Meng¹ Yan Ye²

Abstract: This study was to compare the significant differences in the teachers' perceptions towards school's professional development according to their gender, age, nationality, teaching experience and teaching level at an international school in Pracha Uthit, Bangkok, Thailand. Sixty-five teachers from the international school were surveyed by questionnaire based on Guskey's (2000) Professional Development Evaluation model. The results showed that teachers' perception level towards school's professional development at the international school was high. Majority of teachers thought their professional learning had positive impacts on students' learning achievement, and they felt that could gain new knowledge and skills from it. Nevertheless, teachers had relatively low perceptions regarding to the school professional development for students learning outcomes. No significant differences in the teachers' perceptions towards school's professional development according to their demographics: gender, age, years of teaching experience and grade level teaching were founded at the international school. However, significant differences of teachers' perceptions towards their school's professional development between Thai and Non-Asian existed at the international school in Pracha Uthit, Bangkok.

Keywords: Teachers' Perception; Professional Development; Demographics; International School in Bangkok

Introduction

Among the education reform challenges facing by the today's knowledge society, improving the teachers' quality is considered to be one of the essential elements in the change process. Teacher professional development is one of the most important aspects of training for every school. Teachers are expected to increase their knowledge and develop teaching skills to improve students' achievements. However, it is not easy to develop an effective professional

¹ M.Ed., Chinese Teacher, Singapore international school of Bangkok, Thailand. mengweichao15@gmail.com

² Ph.D., Assistant Professor, Lecturer, Graduate School of Human Sciences, Assumption University, Thailand. norayeyan723@hotmail.com

development program for every teacher, which became many leaders and administrators' challenge. Professional development is the key to improving teacher knowledge. Nevertheless, to ensure an effective professional development program, which is beneficial to teachers, identification of their needs is important.

According to Hargreaves (1994), in most of developed countries of the world, the professional development of teachers is always regarded as the most effective strategy for schools to achieve this expectation. Professional development is a strategy that schools use to ensure that teachers continue to strengthen their practice throughout their careers. The effective professional development motivates teachers to emphasize on the needs of students. As Guskey (2000) noticed, high quality teacher professional development is a central component in improving education. Therefore, the professional development will improve the teachers' quality, as well the students' achievement.

Professional development is the key element to enhance the teachers' competency, which is very important in terms of students' learning and school management. Lowden (2003) stated that professional development in schools was essential to the improvement of teachers' knowledge, skills, teaching pedagogy and also the students' learning, achievement. Moreover, the Teacher Council of Thailand also announced the educational Professional Standards of Thailand in order to guide the teacher professional development in Thailand.

International schools in Bangkok in Thailand offered the education based on international curriculum and aim at inclusive children as a whole to foster independent and confident lifelong learners. Among all kinds of different international schools in Bangkok, there were a lot of competition in many aspects especially in the students' enrollment, quality teachers' recruitment and school's development. For international schools, qualified teachers are one of the important elements that all schools were seeking for, in order to achieve the school management and goals. However, qualified teachers are not born but made, in this regard, how successful an international school's teacher professional development was, may affect the quality of professional teacher teams to some degree.

Research Objectives

1. To determine the teachers' demographic profiles including gender, age, nationality, teaching experience and teaching level at the international school in Pracha Uthit, Bangkok.

- 2. To identify the teachers' perceptions towards primary school's professional development at an international school in Pracha Uthit, Bangkok.
- 3. To compare the teachers' perceptions towards primary school's professional development according to teachers' gender, age, nationality, teaching experience and teaching level at an international school in Pracha Uthit, Bangkok.

Literature Review

Professional Development

In education filed, professional development is used to refer to a wide range of opportunities and specialized program that intend to develop the teachers and other participants' knowledge, skill, competence, and effectiveness.

Abel and Lee (2008) noticed that professional development is an opportunity for teachers and other educators to develop knowledge, skills, methods, and effectiveness in the classroom. Guskey (2000) also noted that all the educational reform emphasized on the quality professional concerned. Thus, it is necessary that the teachers and other educational participants be involved in the professional development in order to succeed in their responsibilities. The No Child Left Behind Act of 2001 (NCLB) provided clear guidelines for the using professional development in one institution, including raising teacher awareness of the academic subject to improve teaching quality. NCLB (2001) also believed that the professional development should be part of the whole improvement plan of the entire organization, not just part of the data working conditions.

Perraton, Creed, and Robinson (2002) mentioned that as the economic globalization and the rapid development of internet communication technology, the career of teaching becomes to be full of challenges. Therefore, teachers' professional development is not just one-time event, it should be one ongoing process. Recently, the continuing professional development and long-life learning are becoming great concern in many nations and countries around the world.

Characteristics of Effective Professional Development

As professional development becomes a requirement of today's education, it is more meaningful to understand the characteristics of teachers. Hunzicker (2010) stated that effective professional development was a process that were:

Supportive

Effective professional development supports teachers' commitment and motivation to learning process. It combined the needs of teachers with school

goals (Flores, 2005), and it also motivated participants at all levels, including administrators and teachers.

Job-embedded

Effective teachers' professional development is job embedded. The context/environment of effective teachers' professional development school, rather than traditional learning venues (Quick, Holtzman, & Chaney, 2009).

Instructional focus

As emphasizing academic subject content and pedagogy as well as students' achievement, effective professional development for teachers was instructionally focused. Many studies showed that effective professional development focused on academic subject content and the way to teach (Lambert, Wallach, & Ramsey, 2007).

Collaborative

Since emphasizing both active and interactive learning experience, effective professional development for teachers was collaborative. (Quick, Holtzman, and Chaney, 2009).

Ongoing

To the end, effective professional development for teachers was ongoing. Guskey (2000) stated that professional development occurred all the time when teachers were teaching, reading educational materials, even talk with other teachers as they can continuously analyze, reflect on what they current teaching and exploring.

Five Levels' Professional Development Evaluation

The evaluation model to collect information of teachers' professional development developed by Guskey (2000) included five levels which were:

Level 1 - Participants' Reactions

This first level identifies the participants' satisfactions towards their professional development experiences. As it was the first and easiest level, the participants were questioned like how much they enjoyed their professional development experiences, which related to the feedback in content, process, and context.

Level 2 - Participants' Learning

The second level investigated the participants' gain from particular professional development experiences, such as the knowledge, skill and competency.

Level 3 - Organization Support and Change

This third level focused on what support and change organization provided to the professional program or activity. With the systematic organizational support, the participants' professional development experiences will be prone to success.

Level 4 - Participants' Use of New Knowledge and Skills

The central questions in this level emphasized whether the new practices of participants' professional development experiences affect their career practice and how well the new skills are used.

Level 5 - Students' Learning Outcomes

The purpose of this evaluation level was to interpret, assess the participants' professional development experiences on students' learning outcomes. Therefore, the evaluation question was addressed as whether the participants' professional development experiences benefit students' learning and achievement.

Previous Studies on Teachers' Professional Development

A few studies about teachers' perceptions towards their professional development in school level have been conducted in these 10 years. Most of them contributed a lot of meaningful findings, including the following studies:

Ivey's (2008) study had evaluated a short-term professional development program at eight schools in Carolina. Her study employed Guskey's (2000) five levels evaluation to analyze the achievement of that program. According to her survey, teachers' reply indicated that they all had a clear understanding of the goal of program, 86% of them felt the in-service professional development was helpful. Urupongsa (2009) conducted a study of teachers' professional development needs at St. Andrews international school in Thailand. Her research found there was no significant difference between the teacher's professional needs in terms of school location.

Williams (2014) indicated that the most common type of evaluation for professional development were observations, the most frequent type of professional development were conducted by presentations and attending courses. She recommended the future researchers to consider not only the teachers' but also the principals' perceptions of professional development. Chit (2015) completed a study on teachers' perceptions towards school professional development according to their demographic at No.26 Basic Education High School in Mandalay Myanmar, she found no significant

differences in the teachers' perceptions towards school's professional development according to their demographic factors.

Andrej (2013) indicated that different culture played an important part in how we perceive, therefore, people from different nationalities may also have different perceptions. The Interface Theory of Perception (Hoffman, 2006) also pointed that perceptual set is concerned with the active nature of perceptual processes and clearly there may be a difference cross-culturally in the kinds of factors that affect perceptual set and the nature of the effect.

Ruangkan (2012) studied the teachers' perception towards the instructional preferences in one educational organization, and found there was a significant difference on instructional preferences based on the teachers' nationalities, in the ways that she described the Non-Thai teachers preferred the Concrete learning method in the training.

Neha (2017) studied the teachers' perception towards the learning through play approach, and comparison on the differences of teachers' perspectives towards the learning through play approach according to their nationalities in selected international schools of Bangkok.

Historic Background of the International School in Bangkok

The school promoted the advantages of Singapore with leading international teaching and curriculum, fully used Singapore national curriculum and teaching materials, combined advanced experience with Thai local actual needs, and positioned the school's teaching focus to improve students' fluency in English, Chinese and Thai. Students were educated as trilingual talents adapted to social development.

As a well-known international school in the region, the school provided inservice teacher training program which was called as PD program during each academic year. Generally, all teachers must attend this kind of activities as the school required so the teachers were the participants surely, but most of them were never being interviewed and invited before the school PD activities were designed. The school leadership team decided the training theme and invited the speakers for the administrative concerns; however, the teachers' perception of professional development might be neglected and there were no studies conducted in the current school from the consideration of the teachers' perspectives.

Conceptual Framework

Figure 1 below shows the framework of this study, which is designed based on the theoretical framework.

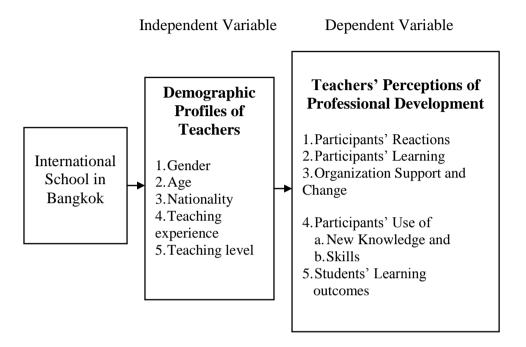


Figure 1: Conceptual Framework

Research Instrument

This research was designed as a quantitative and comparative study. Meanwhile, a questionnaire adopted from Lowden's (2003) Questionnaire, which is developed based on Guskey's Five Levels of Professional Development Evaluation Model, was used as the research instrument for conducting this study. The questionnaire for the primary school teachers in this international school contained two parts. First part of the questionnaire surveyed the demographic profiles of teachers. Second part investigated the teachers' perceptions towards primary school's professional development.

Population

According to the HR record of the school in year of 2018, there were 65 full-time teaching staff who were currently working in primary school of an international school in Pracha Uthit, Bangkok during academic year of 2018. Thus, all 65 full time teachers were used as the study target and the participants for this study.

Validity and Reliability

The research instrument of this study was adopted from Lowden (2003). This questionnaire was validated by Lowden's (2003) study, and its reliability reached .67. The content validity was approved by the curriculum committee members for Lowden's (2003) study.

Williams (2014) study used the same questionnaire and reported an overall value of .84, which indicated strong reliability. Another researcher, Chit (2016) also used this questionnaire and the overall Cronbach's Alpha of her study was .78. The Cronbach's Alpha of the overall reached .74 in this study.

Findings

Research Objective One

Research objective one was to determine the five demographics of teachers including their gender, age, nationality, years of teaching experience and grade level teaching at the international school in Pracha Uthit, Bangkok.

Table 1. The Number of Teachers at the International School in Pracha Uthit. Bangkok Categorized by Gender

Gender	Number	Percentage
Male	27	45.0
Female	33	55.0
Total	60	100

Table 1 above showed the demographic factor gender of the teachers at the international school in Pracha Uthit, Bangkok. The result showed that 45% (27) of the participants were males and 55% (33) were females. Therefore, the number of female teachers was more than the number of male teachers.

Table 2. The Number of Teachers at the International School in Pracha Uthit, Bangkok Categorized by Age

Age	Number	Percentage
Below 25 years	2	3.3
25 - 30 years	15	25.0
31 - 40 years	34	56.7
41 years and above	9	15.0
Total	60	100

Table 2 presented the findings of teachers' age. The age of respondents was grouped into four groups: Below 25 years, 25-30 years, 31-40 years and 41 years and above. The result pointed out that 3.3% of respondents were below

the age of 25 years, 25% of teachers were 25-30 years, 56.7% of teachers were 31-40 years and 15% were 41 years and above teachers. According to the research finding, there was the biggest proportion of teachers who were at age of 31-40 years while teachers of below 25 years were the smallest. Therefore, the majority of respondents were 31-40 years old teachers.

Table 3. The Number of Teachers at the International School in Pracha

Uthit, Bangkok Categorized by Nationality

Nationality	Number	Percentage
Thai	13	21.7
Non-Thai (but Asian)	29	48.3
Non-Asian	18	30.0
Total	60	100

Table 3 presented the findings of teachers' nationality. The result showed that, out of 60 teachers, 13 teachers (21.7%) were Thai, 29 teachers (48.3%) were Non-Thai (but Asian), and Non-Asian teachers were 18 (30.0%). The research finding revealed that there was the biggest number of teachers who were Non-Thai (but Asian).

Table 4. The Number of Teachers at the International School in Pracha Uthit, Bangkok Categorized by Years of Teaching Experience

Years of Teaching Experience	Number	Percentage
5 years and below	10	16.7
5 – 10 years	32	53.3
11 – 15 years	8	13.3
15 years and above	10	16.7
Total	60	100

Table 4 showed the findings of teachers' years of teaching experience. Out of 60 teachers, 10 teachers (16.7%) had 5 years below of teaching experience, 32 teachers (53.3%) had 5 - 10 years of teaching experience, 8 teachers (13.3%) had 11 - 15 years of teaching experience and 10 teachers (16.7%) had 15 years above of teaching experience. The research finding reveled that teachers who had 5 - 10 years of teaching experience were in the biggest number, while teachers with 11 - 15 years of teaching experience were the least number of the total population.

Table 5. The Number of Teachers at the International School in Pracha
Uthit, Bangkok Categorized by Grade Level Teaching

Grade Level Teaching	Number	Percentage
Grade 1-3 (Lower Primary)	26	43.3
Grade 4-6 (Upper Primary)	22	36.7
Both	12	20.0
Total	60	100

Table 5 presented the teachers' grade level of teaching. 43.3% of teachers were teaching at lower primary from Grade 1 to 3 while 36.7% were at upper primary from Grade 4 to 6 and 20.0% were teaching both lower primary and upper primary. The result showed that the least number of teachers were teaching at both two levels and the most teachers were teaching at lower primary from Grade 1 to 3.

Research Objective Two

The research objective two was to identify teachers' perceptions of school's professional development at the international school in Pracha Uthit, Bangkok.

Table 6. Overall Teachers' Perceptions towards School's Professional Development at the International School in Pracha Uthit, Bangkok (n=60)

School's Professional Development	Mean	SD	Interpretation
Participants' Reactions	3.71	0.75	High
Participants' Learning	3.66	0.88	High
Organizations Support and Change	3.76	0.54	High
Use of New Knowledge and Skills	3.84	0.65	High
Students Learning Outcomes	3.65	0.58	High
Total	3.72	0.58	High

Table 16 above demonstrated the total mean score was 3.72, in the range of 3.51 – 4.50, which was regarded as high, at the international school in Pracha Uthit, Bangkok. It also showed the detailed information about total mean scores of teachers' perceptions for each evaluation level. Within the 5 levels, the highest mean score 3.84 which was found in Level 4, while the lowest mean score 3.65 was found in Level 5.

Research Objective Three

Research objective three was to compare the significant differences in the teachers' perceptions towards school's professional development according to their demographics.

Table 7. Comparison of Teachers' Perceptions towards School's Professional Development According to Gender

Gender	N	Mean	SD	t	Sig. (2-tailed)
Male	27	3.383	.627	1.857	.068
Female	33	3.659	.524		

Table 7 indicated that there was no statistical significant difference of teachers' perceptions towards their school's professional development according to their gender at the international school in Pracha Uthit, Bangkok.

Table 8. Comparison of Teachers' Perceptions towards School's Professional Development According to Age

Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.528	3	.509	1.533	.216
Within Groups	18.602	56	.332		
Total	20.130	59			

Table 8 showed there was no significant difference of teachers' perceptions towards their school's professional development according to their age at the international school in Pracha Uthit, Bangkok.

Table 9. Comparison of Teachers' Perceptions towards School's Professional Development According to Nationality

Nationality	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.447	2	1.724	5.889	.005
Within Groups	16.683	57	.293		
Total	20.130	59			

Table 9 indicated that the probability significant value was .005, which was less than .05. Then, the Post Hoc of Scheffe's test to recheck the significant value of teachers' perceptions towards their school's professional development according to their nationality. As Table 10 showed, no significant differences of teachers' perceptions towards their school's

professional development from Thai and Non-Thai (but Asian); Non-Thai (but Asian) and Non- Asian. However, there were significant differences of teachers' perceptions towards their school's professional development between Thai and Non- Asian was existing at the international school in Pracha Uthit, Bangkok.

Table 10. Post Hoc Tests of Teachers' Perceptions towards School's Professional Development at the International School in Pracha Uthit, Bangkok.

(I) Nationality	(J) Nationality	Mean Difference (I-J)	Sig.
Thai	Non-Thai (but Asian)	.364	.140
Hiai	Non- Asian	.674	.005*
Non-Thai	Thai	364	.140
(but Asian)	Non- Asian	.310	.170
Non Asian	Thai	674	.005*
Non- Asian	Non-Thai (but Asian)	310	.170

Table 11. Comparison of Teachers' Perceptions towards School's Professional Development According to Years of Teaching Experience

Years of Teaching Experience	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.385	3	.462	1.379	.259
Within Groups	18.745	56	.335		
Total	20.130	59			

Table 11 showed that there was no significant difference of teachers' perceptions towards their school's professional development according to their years of teaching experience at the international school in Pracha Uthit, Bangkok.

Table 12. Comparison of Teachers' Perceptions towards School's Professional Development According to Grade Level Teaching

Grade Level	Sum of Squares	df	Mean Square	F	Sig.
Between Group	os 1.968	2	.984	3.089	.053
Within Groups	18.162	57	.319		
Total	20.130	59			

Table 12 finally showed there was no significant difference of teachers' perceptions towards their school's professional development according to their grade level teaching at the international school in Pracha Uthit, Bangkok.

Discussion

In this study, the research findings showed that the number of female teachers exceeded the number of male teachers at the international school in Pracha Uthit, Bangkok, However, the male teachers were just a few short than the female teachers. The same as the study of Chit (2015) in Myanmar, she also found the female teachers were much more than male teachers. As most of the male chose a well-paid job rather than teaching profession. However, as the international school was one well-paid private international school in Bangkok, Thailand, and it could recruit teachers in balance way. The findings showed that most of the teachers were in their middle age in the international school in Pracha Uthit, Bangkok. The reason could be compared with many other international schools in Bangkok, the target school was not established for a long time (15 years), and the international schools may prefer the experienced but not too old teachers. Accordingly, the research findings also showed that most teachers had 5 - 10 years of teaching experience, followed by 5 years below and 15 years above of teaching experience, and the least was 11 - 15 years of teaching experience.

This study found that most teachers were Non-Thai (but Asian), followed by Non-Asian teachers, and the least were Thai teachers. The reasons could be the international school in Pracha Uthit, Bangkok was an international school which using the Singapore curriculum therefore, many teachers were form Singapore, China and other Asian countries.

From the research findings, it can be seen that the number of teachers were teaching at lower primary from Grade 1 to 3 more than upper primary from Grade 4 to 6 while very small number of teachers were teaching at both lower primary and upper primary. Through researcher personal schooling experience and observation at the international school in Pracha Uthit, Bangkok; it could be there were more classes and students in lower primary than in upper primary. Moreover, a few teachers were teaching at both lower primary and upper primary the reasons might be that most of the language teachers normally teach more than one grade level. Therefore, they might need to cross lower primary and upper primary.

The discussion on teachers' perception towards school professional development was particularly around the five levels. The first level of teachers' perception towards their school development in terms of their reaction was interpreted as high, at the international school in Pracha Uthit, Bangkok. This was consistent with the previous study of Lowden (2003), who explained that teachers in his study also felt it was generally a positive experience. However, based on the mean scores, it was also found that

teachers' reaction for meeting their needs was relatively low. This finding about the time convenience and effectiveness was also quite similar with William's (2014) study.

The second level was regarded as high based on the study finding. In the previous study of Lowden (2003), the teachers also felt that they had learnt new knowledge, skills and concepts connected to their prior knowledge. Contrary to William's (2014) finding, teachers in her study confirmed not only the new knowledge and skill but also the theory behind the practice because of professional development.

The third level was on how teachers' responses related to organization support and change. Overall, finding from this study indicated that teachers at the international school in Pracha Uthit, Bangkok received school support and resources that would lead positive changes in school. Unlike Lowden (2003) and Williams (2014).

The fourth level was about participants' use of new knowledge and skills, focusing whether or not new practices were useful for their career practice and how well new skills are used. The teachers confirmed positively make changes in teaching, but as for whether their school professional development make long lasting changes in teachers' teaching, the teachers' perception was relatively low. This reflected that teachers expected make long lasting changes in teachers' teaching as Chit (2015) also found in her study.

The last level is to evaluate the impacts of teachers' professional learning on students' learning outcomes, which was high in this study as well. Lowden's (2003) and Williams' (2014) finding in this level was also high.

The researcher then compared the teachers' perceptions towards school's professional development according to their demographics: gender, age, nationality, teaching experience and teaching level. No significant differences in the teachers' perceptions towards school's professional development according to their demographics: gender, age, years of teaching experiences and grade level teaching were found at the international school, but significant differences of teachers' perceptions towards their school's professional development between Thai and Non-Asian existed at the international school. The previous researcher, Williams (2014) also tried to explore the significant differences regarding how teacher perceived their professional development experiences based their demographics, and she found that there were no significant differences.

Nevertheless, this study found that significant differences of teachers' perceptions towards their school's professional development between Thai and Non-Asian existed at the international school. As mentioned before, the most teachers in this school were Non-Thai (but Asian), followed by Non-Asian teachers, and the least were Thai. Previous researchers (Ruangkan, 2012; Neha, 2017) also notified the different perceptions of Thai and Non-Thai teachers in their studies. The cross-cultural study (Andrej, 2013) seems to indicate that different culture plays an important part in how we perceive, therefore, people from different nationalities may also have different perceptions.

REFERENCES

- Abel, S. K. & Lee, M. H. (2008). Making the most of professional development. *Science and Children*, 45(8), 62. (2) (PDF) Perception Theories. Available from: https://www.researchgate.net/publication/310832124 Perception Theo
 - ries [accessed Apr 04, 2019].
- Andrej, D. (2013) *Perception Theories*. Publisher: Towarzystwo Słowaków w Polsce ISBN: 978-83-7490-606-7
- Chit, K. N. (2015). A Comparative Study of Teachers' Perceptions towards School's Professional Development according to Their Demographic at No. 26 Basic Education High School in Mandalay, Myanmar. *Scholar*, *9*(1), 8-12. Retrieved from http://www.assumptionjoumal.au.edu/index.php/Scholar/article/view/2 791
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.
- Guskey, T. R., & Peterson, K. D. (1996). The road to classroom change. *Educational Leadership*, 53(4), 10-14.
- Hoffman, D.D. (2006). The scrambling theorem: A simple proof of the logical possibility of spectrum inversion. *Consciousness and Cognition* 15, 31–45.
- Hunzicker, J. (2010). *Characteristics of effective professional development: A checklist*. Peoria, IL: Bradley University, Department of Teacher Education. Retrieved from http://files.eric.ed.gov/fulltext/ED510366.pdf
- Ivey, H.W. (2008). An Evaluation of a Job Embedded Professional Development Program at Lincoln Academy (Thesis). Retrieved from https://libres.uncg.edu/ir/uncw/f/iveyh2008-1.pdf
- Lowden, C. S. (2003). Evaluating the effectiveness of professional development. Retrieved from https://search.proquest.com/docview/227811461?accountid=8401

- Neha, p. (2017). A Comparative Study of Teachers' Perspectives of the Learning Through Play Approach According to Their Selected Demographics at Selected International Schools in Bangkok, Master Thesis, Assumption University Library.
- No Child Left Behind Act of 2001, United States Congress, 107th Congress of the United States of America Session (2001)
- Perraton, H. Creed, C. & Robinson, B. (2002). Teacher education guidelines: using open and distance learning technology, curriculum, cost, evaluation. Retrieved from http://unesdoc.unesco.org/images/0012/001253/125396e.pdf
- Quick, H. E., Holtzman, D. J., & Chaney, K. R. (2009). Professional development and instructional practice: Conceptions and evidence of effectiveness. *Journal of Education for Students Placed at Risk*, 14(1), 45-71.
- Ruangkan, J. (2012) A Study of Instructional Preferences of The Trainees in Sanofi-Aventis (Thailand) Limited, Master Thesis, Assumption University Library.
- Urupongsa, N. (2010). A study of professional development needs of teachers in St. Andrews International Schools. Retrieved from http://repository.au.edu/handle/6623004553/1301
- Williams, S. L. (2014). Teachers' perceptions of professional development experiences (Order No. 3638324). Available from ProQuest Dissertations & Theses Global. (1618943652). Retrieved from https://search.proquest.com/docview/1618943652?accountid=8401